

Northern Lake Michigan Coastal Regional Master Plan



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**Northern Lake Michigan Coastal
Regional Master Plan**

Approved by the Natural Resources Board

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Wisconsin Department of Natural Resources

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LIST OF ACRONYMS

CTH	County Highway
COA	Conservation Opportunity Area
DNR	Department of Natural Resources
EL	Ecological Landscape
NLMC	Northern Lake Michigan Coastal
NHI	Natural Heritage Inventory
NR 44	Chapter NR 44, Wisconsin Administrative Code, Master Planning for Department Properties
NRB	Natural Resources Board
ROA	Recreation Opportunities Analysis
SCORP	Statewide Comprehensive Outdoor Recreation Plan
SGCN	Species of Greatest Conservation Need
SNA	State Natural Area
ULMC	Upper Lake Michigan Coastal SCORP Region

CHAPTER 1: OVERVIEW OF PLAN AND PROPERTIES

PURPOSE AND MANAGEMENT AUTHORITY

The purpose of this master plan is to guide management and use of department properties in the Northern Lake Michigan Coastal Ecological Landscape. A master plan establishes the levels and types of public uses that are permitted on a property as well as the authorized resource management and facility development that will take place there. Master plans are developed according to guidelines set forth in Wisconsin Administrative Code [Chapter NR 44](#), which is known as the ‘master plan rule’. When establishing management, development and public use for department lands included in this regional plan, staff considered [NR 1.60](#) Wis. Admin. Code standards. DNR properties in this region will continue to provide high-quality natural resources, recreational experiences, and sustainable timber resources for present and future generations.

This plan builds upon the substantial foundation laid by previous master plans, wildlife, parks and fisheries program guidance, and habitat and biotic inventory work conducted over the last several decades. The planning process considers comments received during public meetings and public comment periods, including involvement with federal, state, county, town and local units of government, local agencies and Indian tribes as appropriate.

NORTHERN LAKE MICHIGAN COASTAL ECOLOGICAL LANDSCAPE

The Northern Lake Michigan Coastal (NLMC) Ecological Landscape encompasses portions of Marinette, Oconto, Brown, Shawano, Outagamie, Kewaunee, Waupaca and Door counties. Descriptions of natural resources, socio-economic characteristics and recreational resources for this region are provided in extensive detail in Chapter 15 of *The Ecological Landscapes of Wisconsin* (WDNR 2015a). Chapter 15 is incorporated by reference in this planning document. All chapters of this reference compendium are accessible on the Wisconsin DNR website (dnr.wi.gov) keywords “Ecological Landscapes” then “Northern Lake Michigan Coastal.” A summary of these aspects is provided in Chapter 3 of this master plan.

HISTORY, ECOLOGY AND LAND USE SIGNIFICANCE

The two most prominent features are the Lake Michigan shoreline and the Niagara Escarpment. Door County peninsula and west shore of Green Bay provide about 330 miles of shoreline in this landscape. Both hold great importance to Wisconsin and the United States because of the critical role they play in maintaining Wisconsin’s unique biological diversity. Soils in this Ecological Landscape range from excessively-drained sandy and stony; to well-drained, fertile loam; to poorly-drained clay. Vegetation is equally varied. Forests include maple, basswood and beech throughout the landscape. Beech are generally limited to this region of the state.

Habitats associated with the Lake Michigan shore such as alkaline rock shores, coastal estuaries, ridge and swale wetland complexes, beaches and dunes, support many species endemic to the Great Lakes; including dwarf lake iris, Lake Huron locust, dune thistle, and Hine’s emerald dragonfly. These habitats

also provide critical nesting, feeding and resting habitat for a wide variety of migratory songbirds and shorebirds. Small islands along the Door Peninsula and in Green Bay host enormous rookeries of terns, herons and gulls.

Green Bay supports an impressive warmwater fishery. Wetlands along the west side of the bay, and lining the many streams and rivers that flow into the bay from the west, provide the majority of fish spawning habitat. Protecting these spawning locations and the water quality is critical to maintaining the perch, walleye, lake sturgeon and pike populations of Green Bay. Large Rivers that flow through this landscape are the Oconto, Peshtigo and Menominee Rivers.

425 million years ago deposition from large inland seas formed the Niagara Escarpment; a long outcropping of dolomite (hard limestone). The sickle-shaped ridge has a steep face on one side (an escarpment) and gently slopes on the other. It begins in south-central Wisconsin, forms the Door Peninsula, arches through the Garden Peninsula (Upper Michigan), the Bruce Peninsula (Canada), and eventually reaches Niagara Falls (New York/Canada). Bluffs and rocky slopes of the escarpment harbor cool springs and microhabitats that support many rare species. The unique habitat allows ancient cedar trees to grow, though they only do so at a rate of one inch every 15 years. One such tree, a northern white cedar, was aged in Peninsula State Park to be over 500-years-old.

This Ecological Landscape's historic vegetation was primarily forested. American beech and hemlock were primary components of extensive northern hardwood forests. Lowland forests included conifer swamps with spruce, tamarack, and northern white cedar. The forests in the cool, moist climatic zones near Lake Michigan resembled the boreal forests of more northern Ecological Landscapes. Floodplain forests were present along the western shores of Green Bay.

Current vegetation is more than 60% non-forested land. This non-forested land is mostly agricultural crops, but also urban-industrial areas such as the cities of Green Bay and Sturgeon Bay. Remaining forested lands are dominated by maple-basswood, with small amounts of lowland hardwoods, aspen-birch, and lowland conifer forests. The interior of the Door Peninsula is now mostly agricultural or residential in nature. A coastal strip on the east side of the Door Peninsula remains heavily forested, though it is rapidly becoming fragmented due to residential developments. The largest forest remnants in the Door Peninsula are mostly wet, conifer or hardwood swamps. The west shore of Green Bay still supports extensive areas of second-growth lowland forest, now dominated by hardwoods rather than the historical conifers. Dry forest remnants are locally common in Oconto and Marinette counties.

RECREATIONAL SIGNIFICANCE

The Northern Lake Michigan Coastal Ecological Landscape properties feature resources that attract visitors from Wisconsin and Illinois, especially from the Milwaukee/Chicago metropolitan areas. Door County is a major vacation destination for people throughout the Midwest and is nationally recognized as a premier vacation destination. While the region's population density is slightly less than half that of the state average its recreational resources receive heavy use.

Demand for the unique recreation opportunities in this landscape exceeds the capacity of existing department lands. Although the region contains diverse outdoor recreation opportunities provided by state, federal and county lands, only about 5% of the Ecological Landscape is public land (70,000 acres). This is significantly less than the statewide average of 19% and ranks this Ecological Landscape 12th (out



of 16) in the percentage of public ownership of land. Even so, Door County has an above average number of state parks and recreation areas.

Lake Michigan and its shoreline are the foundation of much of the recreation in this part of the state. Boating, fishing and sailing are popular summertime pursuits, while snowmobiling, cross-country skiing and ice fishing draw visitors in the winter. The Niagara Escarpment offers tremendous views of Green Bay and Lake Michigan throughout the year. Although five state parks and several local and private campgrounds are in the region, demand for camping far exceeds current supply.

In the western section of this Ecological Landscape little public recreation land exists. State-owned lands are concentrated along the west shore of Green Bay and, although they provide popular hunting opportunities, their significant amounts of wetlands limit the variety of recreation activities that can be accommodated.

INTRODUCTION TO THE PROPERTIES

The regional master plan for the Northern Lake Michigan Coastal (NLMC) Ecological Landscape contains over 30,000 acres of department managed lands. These properties include wildlife areas, state parks, natural areas, state forests and fishery areas within five counties: Oconto, Marinette, Waupaca, Shawano and Door. An overview of these properties is provided in Table 1. Property designations in this region include state parks, state wildlife and fishery areas, and state natural areas.

The NLMC master plan is a regional plan for all department properties within this landscape. Department-managed properties are portrayed along with other nearby public conservation lands in the Regional Locator map series (Map A-1; Maps B-1 through B-4). Management for approximately 17,000 acres of department properties, just over half the total acreage in this Ecological Landscape, is specifically addressed in the body of this document (Chapter 2). Properties in this Ecological Landscape with NR 44 compliant master plans (seven plans noted in Table 1 below) are hereby incorporated by reference into the NLMC regional master plan.

Properties that share boundaries with more than one Ecological Landscape (i.e. Peshtigo State Forest and Lower Wolf River Bottomlands) are planned in the Ecological Landscape in which most of their acreage resides. Peshtigo State Forest and Lower Wolf Bottomlands are not part of the NLMC Regional Master Plan.



Table 1: Northern Lake Michigan Coastal Properties at a Glance

Property Name	County	Acreage*
Major Properties		
Copper Culture Mounds State Park	Oconto	42.30
Newport State Park	Door	2,372.99
Peninsula State Park	Door	3,827.52
Potawatomi State Park	Door	1220.50
Rock Island State Park	Door	912.23
Whitefish Dunes State Park	Door	863.88
Grand Traverse Islands State Park	Door	26.67
Gardner Swamp Wildlife Area	Door	1,180.58
Lake Noquebay Wildlife Area	Marinette	1298.08
Mud Lake Wildlife Area	Door	2365.40
Seagull Bar Wildlife Area	Marinette	90.00
North Branch Beaver Creek Fishery Area	Marinette	1161.37
Jung Hemlock-Beech Forest State Natural Area	Shawano	80.00
Kroenke Lake State Natural Area	Shawano	150.67
Tellock's Hill Woods State Natural Area	Waupaca	52.00
State Public Access Sites		
Rowleys Bay State Public Access	Door	3.25
Bay Road State Public Access	Door	0.69
County Highway P Peshtigo River State Public Access	Marinette	4.13
Rieboldt Creek State Public Access	Door	121.00
Cox Landing Menominee River State Public Access	Marinette	1.10
Pensaukee River State Public Access	Oconto	1.21
George K. Pinney State Public Access	Door	10.68
Baileys Harbor State Public Access	Door	0.72
Menomonie River (CTH JJ) State Public Access	Marinette	1.37
Minor State Habitat Areas		
Barkhausen State Habitat Area	Brown	45.89
Big Creek State Habitat Area	Door	19.92
Bass Lake Marinette State Habitat Area	Marinette	39.14
Little River State Habitat Area	Marinette	53.17
Cowyard Rips State Habitat Area	Shawano	47.10
Pensaukee River State Habitat Area	Oconto	15.34
Big and Little Marsh State Habitat Area	Door	10.42
Egg Harbor Cliffs State Habitat Area	Door	0.86
Suamico River State Habitat Area	Brown	10.88
Strawberry Creek State Habitat Area	Door	74.00
Montana Lake Fishery Area	Marinette	105.73
Sister Islands Habitat Preserve	Door	1.94
Minor State Natural Areas		
North Bay State Natural Area	Door	2.50



Property Name	County	Acreage*
Administrative Properties		
Sturgeon Bay Service Center	Door	1.30
Strawberry Creek State Hatchery	Door	6.0
Gresham Station	Shawano	4.68
Oconto Falls Ranger Station	Oconto	5.39
Properties with NR-44 Compliant Master Plans incorporated by reference		
Coffey Swamp State Natural Area	Door	186.49
Big and Little Marsh State Natural Area	Door	308.80
Baileys Harbor Boreal Forest and Wetland State Natural Area	Door	482.03
Moonlight Bay Bedrock Beach State Natural Area	Door	98.25
Thorp Pond State Natural Area	Door	80.00
Cave Point Clay Banks State Natural Area	Door	443.42
Green Bay West Shores Wildlife Area	Brown, Oconto, Marinette	9809.10

*Acreages in this table represent property deed legal descriptions and were obtained from DNR's Land Records System. These acreages may differ from those calculated from the DNR Managed Lands GIS spatial database.



CHAPTER 2: MANAGEMENT, DEVELOPMENT AND USE

This chapter contains two sections of instructions to achieve an overarching vision and goals:

Section One contains a brief description of the individual properties with property-specific management elements.

Section Two contains a real estate glossary applicable to master planning.

Appendices A, B and C contain “Common Elements” that generally apply to all Northern Lake Michigan Coastal properties, such as habitat management by cover type and recreation types and general management practices that occur on all DNR lands..

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

REGIONAL VISION AND GOALS

The NLMC Ecological Landscape properties are a vital contributor to the preservation of the Niagara Escarpment and the Lake Michigan shoreline (Door County peninsula and west shore of Green Bay). This landscape plays a key role in protecting water resources along the Peshtigo, Wolf, Oconto and Menominee rivers. Recreational opportunities provided by department properties include enjoyment of unique Lake Michigan coastal scenery and recreational pursuits, abundant watercraft uses, camping, multiple trail uses, hunting, fishing, trapping, gathering, wildlife watching and educational opportunities. The abundance and diversity of natural resources along the Niagara Escarpment, including the rare dwarf lake iris, Hines emerald dragonfly, and spectacular bird migrations throughout this majestic landscape, attract visitors from afar who appreciate the grand scale of the Lake Michigan coastal region.

Recreational opportunities on these properties and in this landscape, are supported in part by community, regional and government partnerships that support wildlife and sustainable habitat management for current and future generations.

Goals

- Provide opportunities for hunting, fishing, trapping and gathering.
- Provide opportunities for high-quality nature-based recreational activities; such as wildlife viewing, scenic viewing, nature study, trail-based activities and paddling as compatible with the properties' capabilities, and regional habitat and recreation goals.
- Accommodate research and provide 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.
- Restore, manage and perpetuate the major natural community habitats that support an intact Ecological Landscape, using principles of ecosystem management and sustainable forestry. Protect the integrity of the Niagara Escarpment.

- Protect the Lake Michigan shoreline and its tributaries through sound property and watershed management practices. Provide habitat for the unusual number of migratory birds that are dependent on Lake Michigan's coastal communities, and for wildlife associated with inland wetlands and rivers.
- Manage in ways that contribute to the protection and preservation of the Outstanding and Exceptional Resource Waters, wetlands and lakes in this landscape.
- Maintain and enhance ecological connectivity between natural community habitats, and on a landscape scale, promote their sustainability in partnership with nearby town, county, state, federal and tribal land managers.
- Contribute to the local and regional economies through management of sustainable recreational opportunities, and sustainably produced forest products.

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

LAND MANAGEMENT CLASSIFICATIONS

Management of department properties generally is described by a specific land management classification, per [NR 44](#), that describes the primary management objectives for a property or management unit within a property. These classifications are determined during the master planning process and help identify the preferred set of actions to achieve short- and long-term objectives. Only management activities or techniques identified or referenced in this master plan and compatible with the site's ecological capability may be pursued in these management areas. Parcels purchased after master plan approval will likely be assigned the same classification as the adjacent area unless an evaluation indicates that a different classification is more appropriate. A plan amendment will be pursued if warranted.

The department lands in the NLMC regional plan have been assigned the following land management classifications:

Habitat Management Area (HMA) (NR 44.06(5)): 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)): NCMA's are managed to perpetuate pre-settlement plant and animal communities, whether upland, wetland, or aquatic, and protect the biological diversity of the native ecosystems. A native community is a distinct and reoccurring assemblage of indigenous flora and fauna associated with a 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 NCMA's 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 and 4 Recreational Use Settings: Lands in this classification are managed to provide and maintain land and water areas and facilities for outdoor



public recreation and education. Recreational use setting sub-classifications define the compatible management and use activities and the appropriate recreational facilities for four general recreational settings.

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.

Table 2 summarizes the land management classifications assigned to major properties in the Northern Lake Michigan Coastal Ecological Landscape. Land management classification acreages are calculated using GIS and are assigned for the entire project boundary. Consequently, acreages in Table 2 will usually not equal the deed acres provided in Table 1. More detailed information about land management classifications for the entire landscape is provided in Chapter 2.

Table 2: Land Management Classifications, in acres, for major properties in the Northern Lake Michigan Coastal Region.

Property	HMA	NCMA	SMA	Recreation Management Area	
				Type 3	Type 4
Copper Culture Mounds State Park				56	14
Newport State Park		1,760	8	690	37
Peninsula State Park		1,364	8	864	1490
Potawatomi State Park		557	9		643
Rock Island State Park		856		119	6
Whitefish Dunes State Park		402	1	419	146
Grand Traverse Islands State Park	936				
Gardner Swamp Wildlife Area	1222				
Lake Noquebay Wildlife Area	587	662			
Mud Lake Wildlife Area - Door	394	2460			
Seagull Bar Wildlife Area		116			
North Branch Beaver Creek Fishery Areas	1940	177			



Property	HMA	NCMA	SMA	Recreation Management Area	
Jung Hemlock-Beech Forest State Natural Area		79			
Kroenke Lake State Natural Area		361			
Tellock's Hill Woods State Natural Area		116			