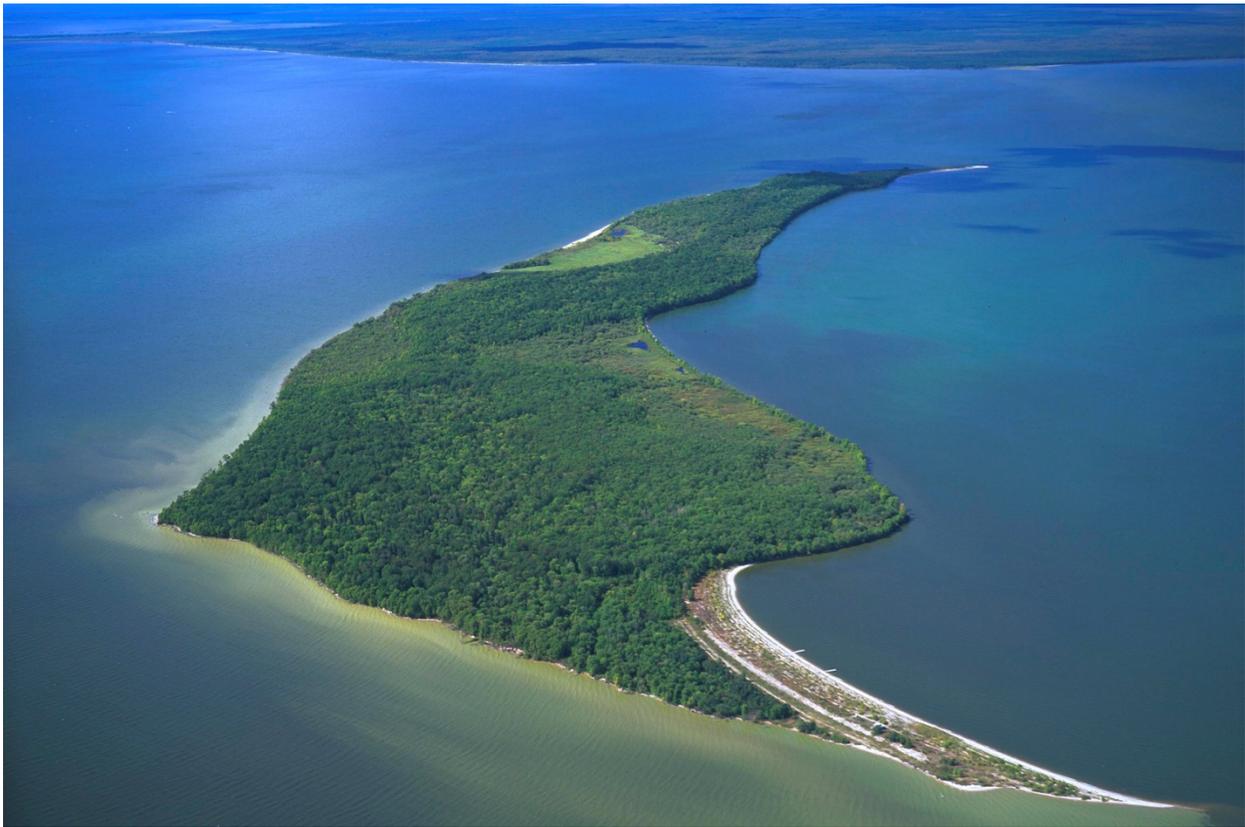


Garden Island State Recreation Area Management Plan



Aerial view of Garden Island.



Minnesota Department of Natural Resources
Division of Parks and Trails

September 2016



For more information on this management plan, please contact the DNR Division of Parks and Trails at (651) 259-5600.

Copyright 2016 State of Minnesota, Department of Natural Resources

This information can be made available in alternative formats such as large print, braille or audio tape by emailing info.dnr@state.mn.us or by calling 651-259-5016.

The Minnesota DNR prohibits discrimination in its programs and services based on race, color, creed, religion, national origin, sex, public assistance status, age, sexual orientation or disability. Persons with disabilities may request reasonable modifications to access or participate in DNR programs and services by contacting the DNR ADA Title II Coordinator at info.dnr@state.mn.us or 651-259-5488. Discrimination inquiries should be sent to Minnesota DNR, 500 Lafayette Road, St. Paul, MN 55155-4049; or Office of Civil Rights, U.S. Department of the Interior, 1849 C. Street NW, Washington, D.C. 20240.



Minnesota Department of Natural Resources

500 Lafayette Road • St. Paul, MN • 55155

Department of Natural Resources Approval of Garden Island State Recreation Area Management Plan

Minnesota Statutes, section 86A.09, sub. 1 requires that a master plan be prepared for units of Minnesota's Outdoor Recreation System, including state parks and state recreation areas. The Laws of Minnesota for 1998, chapter 391, established Garden Island State Recreation Area (*Minnesota Statutes*, section 85.013, subd. 11a.)

The Minnesota Department of Natural Resources worked in partnership with Minnesota citizens and an interdisciplinary resource team to develop the management plan (master plan) for Garden Island State Recreation Area. The management plan was reviewed and approved by the Northwest Regional Management Team.

Erika Rivers

Erika Rivers, Director
MNDNR Division of Parks and Trails

9/16/2016

Date

www.dnr.state.mn.us

AN EQUAL OPPORTUNITY EMPLOYER



PRINTED ON RECYCLED PAPER CONTAINING A MINIMUM OF 10% POST-CONSUMER WASTE

Table of Contents

1.	Executive Summary.....	1
2.	State Recreation Area Description.....	1
3.	Role of Garden Island State Recreation Area in the State Park System	2
4.	Statutory Authorization	3
5.	Planning Process	4
6.	Regional Analysis.....	5
7.	Natural Resources.....	8
8.	Cultural Resources	16
9.	Interpretive Services	17
10.	Recreation Management and Operations	18
11.	State Recreation Area Boundary.....	21
12.	Plan Modification Process.....	21
13.	Bibliography	23

Figures and Tables

Table 1:	County Population Estimates 2010-12.....	5
Figure 1:	Regional Recreational Opportunities.....	7
Figure 2:	Ecological Subsections	9
Figure 3:	Land Cover Map	12
Table 2:	Endangered, Threatened, and Special Concern Species	14
Figure 4:	All Season Map.....	20

1. Executive Summary

This plan documents a public planning process and sets direction for future management and development at Garden Island State Recreation Area (SRA). *Minnesota Statutes*, section 86A.09 requires that construction of facilities and other development conform to the management plan. A citizen advisory committee provided input on plan recommendations and a draft plan was available for public review.

In 2015, the Division of Parks and Trails completed a System Plan to advance new approaches to managing DNR's state parks, recreation areas, trails, forest recreation areas, and water recreation system. The System Plan recommends a differentiated system where each individual park will serve a niche within a system that offers a diverse range of recreational opportunities.

Garden Island SRA is designated as a Rustic Park in the System Plan. Rustic parks will provide basic amenities and more self-directed services. These parks will focus on serving local users and those seeking a quiet, natural experience.

The following is a summary of key recommendations made in this plan. A complete list of recommendations can be found in the individual chapters of the plan. Implementation of recommendations in this plan will depend on funding, operational support, and implementation of the Division of Parks and Trails System Plan.

- Preserve and protect the natural resources of Garden Island State Recreation Area through strategies suited to its remote and isolated location.
- Conduct resource assessments to avoid or mitigate impacts to natural and cultural resources.
- Update the Park Unit Interpretive Plan with a focus on non-personal interpretation.
- Provide quality facilities for day-users.
- Evaluate opportunities for limited overnight use.

2. State Recreation Area Description

The Garden Island State Recreation Area statutory boundary includes portions of five islands. All state recreation area land owned and managed by the DNR is on Garden Island. DNR owns 734 acres on Garden Island, with approximately 40 acres of the island outside of the statutory boundary owned by the Red Lake Band of Ojibwe. Babe,

Bridges, Knight, and part of Little Oak Island comprise the remaining portions of the statutory boundary.

Garden Island is a low, sandy island with beautiful beaches along the eastern tip. Much of the island is densely wooded, with some marshy areas.

Shorebirds of all kinds stop to rest and feed on the sand beaches of Garden Island during their annual migrations. Pelicans, cormorants, gulls, and terns are all commonly seen on the sand spit stretching out to the island's eastern tip. Deer, bear, beaver, mink, otter, fox, and snowshoe hare have all been observed on the island. Grey wolves have occasionally been seen hunting on the island during the winter months. Several pairs of bald eagles nest there each year (MNDNR 2013b).

SRA facilities include boat docks on Falcon Bay, the northerly side of the sand spit that curves out from the east side. There is also a picnic area, storm shelter, a composting toilet and vault toilets. Camping is not allowed in the SRA. Visitors are asked to pack out all materials, including garbage, from the island.

3. Role of Garden Island State Recreation Area in the State Park System

Remote and virtually undeveloped, Garden Island SRA is the northernmost unit of the Minnesota State Park system. Part of its attraction is the challenge of getting there. The island is 21 miles away from the south shore of Lake of the Woods and not visible on the horizon. The island's name comes from its historic purpose as common grounds for Ojibwe people who planted gardens here each summer.

Features that make Garden Island SRA an important and unique part of the state's recreation system include:

- 6.5 miles of undeveloped Lake of the Woods shoreline nesting habitat (S-1, critically imperiled).
- Upland forests with southern MN species, such as Dutchman's breeches and red-berried elder, and large patches of Canada yew.
- Potential piping plover nesting sites.
- Black ash forest that may provide a population isolated enough from emerald ash borer threat to serve as genetic refugia in the future.



Waves roll onto the sandy beaches of Garden Island.



Pelicans are a common sight on the sand spit stretching out the island's eastern tip (Photo courtesy of John Tschudy).

- Lake of the Woods was an important hub for the transportation network that led to exploration and colonization of North America.

Garden Island SRA is a place to experience the best of nature – waves on the beach, undisturbed plants, and glimpses of shorebirds and raptors. The vision of this management plan is that Garden Island SRA provides:

A refuge on Lake of the Woods for boaters or snowmobilers that compliments and deepens the visitor's up north experience by providing access to unique wildlife and high quality native plant communities.

4. Statutory Authorization

Minnesota Statutes 85.013 Subd. 11a. authorizes Garden Island State Recreation Area; it was purchased and added to the state recreation area system in 1998. (1998 c 391 s 3; 2001 c 182 s 4 subd 2; 2008 c 368 art 1 s 22)

The Outdoor Recreation Act of 1975 identifies state parks and recreation areas as units of Minnesota's outdoor recreation system and designates DNR as the managing agency for these units. The act describes the purposes of SRAs, criteria for new SRAs, and how they should be managed. According to the act, the purposes of SRAs are:

"... to provide a broad selection of outdoor recreation opportunities in a natural setting which may be used by large numbers of people."

The act also states that new SRAs should not be established unless its proposed location substantially satisfies the following criteria:

1. *Contains natural or artificial resources which provide outstanding outdoor recreational opportunities that will attract visitors from beyond the local area;*
2. *Contains resources which permit intensive recreational use by large numbers of people; and,*
3. *May be located in areas which have serious deficiencies in public outdoor recreation facilities, provided that state recreation areas should not be provided in lieu of municipal, county, or regional facilities.*

For the most part, two chapters of *Minnesota Statutes* govern the creation and management of the state park system: Chapter 85 and Chapter 86A, also called the Outdoor Recreation Act of 1975. Only the

Legislature can create, expand, or change the boundaries of state parks, recreation areas, and waysides. Chapter 85 lists state parks and other areas established in state law. It also governs state park permits and fees, special uses of state parks, food and beverage service in certain state parks, special leases, special revolving fund accounts, and other aspects of state park management. In addition, the Commissioner of DNR has promulgated rules that regulate recreational use, personal behavior, and unlawful activities in state parks. It is the responsibility of park managers and other authorized employees to enforce park rules.

The Outdoor Recreation Act of 1975 identifies state parks and state recreation areas (SRAs) as units of Minnesota's outdoor recreation system and designates DNR as the managing agency for these units. The act directs DNR to manage SRAs:

"... to provide as broad a selection of opportunities for outdoor recreation as is consistent with maintaining a pleasing natural environment. Scenic, historic, scientific, scarce, or disappearing resources within state recreation areas shall be recommended for authorization as historic sites or designated scientific and natural areas pursuant to section 86A.08 to preserve and protect them. Physical development shall enhance and promote the use and enjoyment of the natural recreational resources of the area."

5. Planning Process

This plan was developed in conjunction with management plans for two neighboring facilities: Zippel Bay State Park and Franz Jevne State Park. These units, along with Pine & Curry Islands Scientific and Natural Area, Hayes Lake State Park, Prosper Wildlife Management Area, Big Bog State Recreation Area, Beltrami Island State Forest, Pine Island State Forest, Blueberry Hill State Forest Campground, and Faunce State Forest Campground, are portals to the natural and cultural resources of extreme northern Minnesota.

Public input is a valued and influential part of the planning process. Park staff and planners work with other DNR staff, other agencies, local government officials, local legislators, and citizens during the planning process. This management plan was developed through an open public process that included:

- Natural and cultural resource assessment work, including literature review and field research.

- Consultation with a citizen advisory committee throughout plan development.
- Two public open house meetings, one before plan development and one after, to give participants an opportunity to ask questions and provide input on the draft management plan.
- A 30-day public review period for the draft management plan.

6. Regional Analysis

The counties surrounding Garden Island SRA are relatively low in population, and are predicted to lose population over the next 20 years. The density, or number of people per square mile, is among the lowest in the state.

Having high quality natural areas within a few hours travel of population centers is important to local citizens. Moreover, the overall rural character of the communities surrounding Garden Island SRA enhances the attraction of the region to visitors. The population of the counties surrounding the park is generally older than the median age of Minnesotans, and household incomes are somewhat lower as well.

The table below shows population estimates for the seven counties closest to Garden Island SRA. The numbers and estimates are from the Minnesota State Demographic Center (2013).

Table 1: County Population Estimates 2010-12

County	2010 Estimate	2011 Estimate	2012 Estimate
Beltrami	44,442	45,212	45,325
Kittson	4,552	4,528	4,496
Koochiching	13,311	13,221	13,208
Lake of the Woods	4,045	4,011	3,976
Marshall	9,439	9,473	9,445
Pennington	13,930	14,018	14,075
Roseau	15,629	15,536	15,484

Regional Recreation and Tourism Opportunities

Research conducted by the University of Minnesota’s Center for Changing Landscapes provides information about the demographic of visitors to Northwest Minnesota as well as their experiences when visiting the region (Davenport 2011). In general, popular recreation activities in the region are walking or hiking, boating, swimming, and



Garden Island SRA serves as a wayside for snowmobilers on their way to and from the Northwest Angle.

Garden Island State Recreation Area Management Plan

driving for pleasure. Residents of the Northwest list hunting, all-terrain vehicle driving, and snowmobiling as favored recreational activities.

Visitors to the region are generally Minnesota residents (49 percent), with the next largest segments coming from the Fargo-Valley City area (32 percent). One of five visitors visited a state or national park and one of ten overnight visitors stayed at campgrounds. Almost three-quarters (71 percent) of visitors indicated participating in one or more recreation activity. The most common activities were fishing (28 percent), pool swimming (23 percent), and lake/river swimming (20 percent).

Boating use across Minnesota has remained stable over the past 20 years. Public accesses continue to be used increasingly by riparian residents and resorts or private campgrounds on the lake.

Accesses are serving a broader market today than in the past. Boaters give high marks to accesses. A leading problem with accesses identified by the research is their perceived small size including parking lots, and launch ramps (Kelly 2009).

The main activity of boaters has continued to shift from fishing to pleasure boating. Craft types continue to be larger, more substantial, and are equipped with larger motors. In the 1980s, the average boat size was 16 feet and the motor was 50 horsepower. Today, the average boat size is 18 feet and the motor is 100 horsepower. Statewide, pontoons are rapidly becoming the craft of choice for riparian residents, though Lake of the Woods remains primarily a fishing boat destination.

Boating is the second most popular recreation activity by adults in Minnesota (walking is ranked first) (Davenport 2011). Further, Minnesota ranks second in the nation for anglers per capita and third for total number of boats per capita.

Garden Island SRA contributes to the region's recreational resources by providing a remote refuge for boaters and snowmobilers. It is also important because it provides a unique location for day use picnicking and nature watching.

This management plan recommends strategies to enhance these services, which will complement, but not compete against, other recreational resources of the region.



A boat docks in Falcon Bay on the northeast side of Garden Island.



Hiking on Garden Island.

Legend

- Minor Cities
- Small Cities
- State Park
- ▲ State Recreation Area
- County Boundaries
- 50 Mile Radius
- Voyageurs National Park
- State Forests Management Units
- Wildlife Management Area
- Scientific and Natural Area
- ~ Off-Highway Vehicle Use
- Ruffed Grouse Management Area
- ☁ Lake, Pond or Reservoir
- Public Water Access
- ▲ Campgrounds
- ~ Minnesota State Trails
- ~ GIA Snowmobile Trails
- ~ Minnesota Water Trails



Garden Island State Recreation Area

Figure 1: Regional Recreation Opportunities



Minnesota Department of Natural Resources
 Division of Parks and Trails
 September 2014



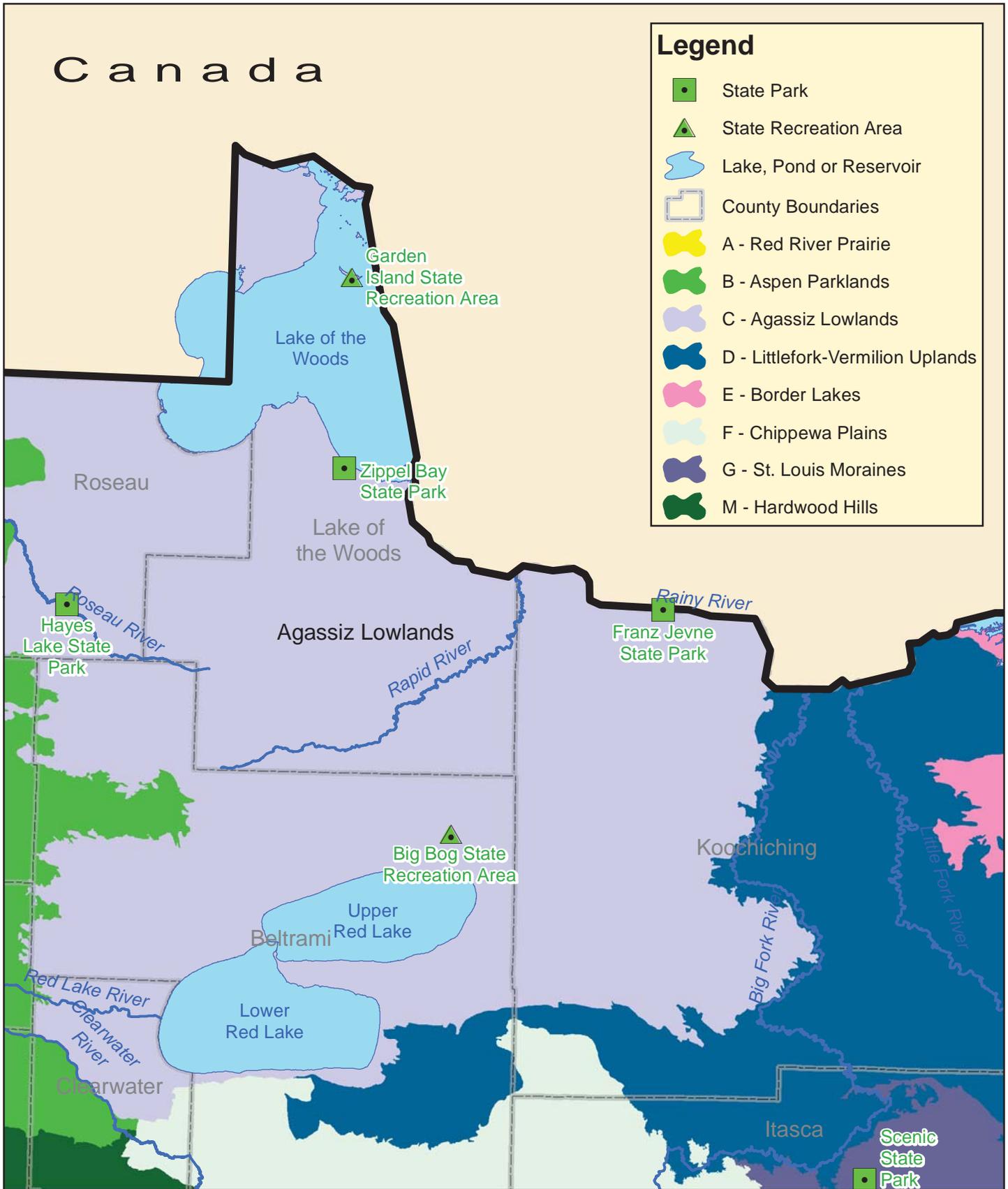
7. Natural Resources

Ecological Classification System

The DNR and the U.S. Forest Service have developed an Ecological Classification System (ECS) for ecological mapping and landscape classification in Minnesota. Ecological land classifications are used to identify, describe, and map progressively smaller areas of land with increasingly uniform ecological features. The system uses associations of biotic and environmental factors for classification, including climate, geology, topography, soils, hydrology, and vegetation. The largest unit is the Province, units of land defined using major climate zones, native vegetation, and biomes such as prairies, deciduous forests, or boreal forests. Provinces are divided into sections, then subsections.

Laurentian Mixed Forest Province

Garden Island SRA is located in the Laurentian Mixed Forest (LMF) Province. The LMF Province traverses northern Minnesota, Wisconsin, and Michigan, southern Ontario, and the less mountainous portions of New England. In Minnesota, the LMF Province covers a little more than 23 million acres (9.3 million hectares) of the northeastern part of the state. In Minnesota, the LMF Province is characterized by broad areas of conifer forest, mixed hardwood and conifer forests, and conifer bogs and swamps. The landscape ranges from rugged lake-dotted terrain with thin glacial deposits over bedrock, to hummocky or undulating plains with deep glacial drift, to large, flat, poorly drained peatlands. Precipitation ranges from about 21 inches (53 cm) annually along the western border of the Province to about 32 inches (81 cm) at its eastern edge in Minnesota. Normal annual average temperatures range from about 34°F (1°C) along the northern part of the LMF Province in Minnesota, to 40°F (4°C) at its southern extreme. Under influence of climate, the overall pattern of vegetation change across the LMF Province in Minnesota is warm and dry habitats in the southwest to cooler and moister ones in the northeast. Linked to climate are several other factors with southwest to northeast gradients that have important influence on vegetation and species ranges. Most notable are growing-degree days, evapotranspiration, and the depth and duration of snow cover.



Garden Island State Recreation Area

Figure 2: Ecological Subsections



Minnesota Department of Natural Resources
 Division of Parks and Trails
 September 2014



Northern Minnesota and Ontario Peatlands Section

The Northern Minnesota and Ontario Peatlands Section (MOP) is flat and poorly drained. About half of the section consists of clay deposits from ancient Glacial Lake Agassiz. The lake deposits are covered primarily by bogs, swamps, fens, and other peatland vegetation. At the eastern edge of the MOP Section, the peatlands are acidic, deep, and old (>4,000 years) and support extensive areas of acid peatland communities such as black spruce bogs and poor swamp forests. At the western edge of the MOP Section, the peatlands are richer in minerals, shallower, and younger (~1,000 years). Tamarack swamps, rich fens, and other rich peatland communities tend to be common in this part of the MOP Section. Some areas, especially along the eastern and southern borders of the MOP Section in the Littlefork Vermilion Uplands Subsection, have uplands formed of glacial till that was eroded and flattened by wave action from Glacial Lake Agassiz. Mesic and wet forests of aspen, paper birch, spruce, balsam fir, white cedar, and black ash are typical in these areas. Sandy shoreline deposits from recessional stages of Glacial Lake Agassiz formed uplands that are present across the MOP Section. These low, sandy uplands are less extensive than either the peatlands or glacial till uplands. They are characterized by fire-dependent forests of jack pine or red pine.

Agassiz Lowlands Ecological Subsection

Landform

Garden Island SRA is located in the Agassiz Lowlands Ecological Subsection. In this subsection peatlands occupy the large glacial lake bed. The mineral substrate consists of calcareous silty till, with a thin veneer of lake sediments (Glaser et al. 1981, referencing Wright 1972). Sediments vary in texture across the extensive lake bed. Sandy beach ridges are exposed throughout the subsection (Albert 1993).

Bedrock geology

Glacial drift is thinnest at the northern and eastern edges of the lake plain, where bedrock is locally exposed (Olsen and Mossler 1982). Drift is up to 300 feet thick at the western edge of the basin. The underlying bedrock is Precambrian (Late Archean) in age, and includes gneiss, amphibolite, undifferentiated granite, and metamorphosed mafic to intermediate volcanic and sedimentary rocks. There are also iron formation, metasediments, and metamorphosed felsic volcanic rocks (Morey 1976).

Hydrology

The landscape is virtually level, which is reflected by the drainage network. Extensive ditching of the peatlands was done in the earlier part of this century in an effort to promote agricultural development of the region. These efforts were unsuccessful however. The Big Fork and Rainy Rivers are the largest rivers running through the subsection. The Rainy River forms part of the northern boundary of the subsection as well as the state. There are three large lakes that are remnants of Glacial Lake Agassiz. They are Lower Red Lake, Upper Red Lake, and Lake of the Woods, which encompasses Garden Island and the SRA.

Soils

Soils in this subsection are predominantly organic (Dept. of Soil Science, Univ. of Minnesota 1980c, 1981b). There is a greater percentage of organic soils in the center of the lake basin, with increased amounts of poorly drained mineral soils near the edges. About 75 percent of the soils are peats in this portion of the basin. Peat depths can exceed 15 feet (Heinselman 1963). Soils are classified primarily as Hemists, Aqualfs, and Aquepts (Anderson and Grigal 1984). Hemists occupy the center of the lake basin, whereas Aqualfs and Aquepts are present along the margins of the basin.

Inventory

DNR has mapped the land cover of approximately 532 acres of Garden Island SRA. Although acreages on four outlying islands have yet to be classified; all mapped acres of Garden Island are high quality native plant communities.¹ Garden Island has 40 acres of tribal lands that were not classified and lie outside the statutory boundary.

Two rare botrychium – ferns known as moonworts - were found on Garden Island in 1894. Recent attempts to locate them have been unsuccessful. Additionally, plants usually found further south such as Dutchman’s Breeches (*Dicentra cucullaria*) and Red-Berried Elder (*Sambucus racemosa*) are common on Garden Island, probably due to the moderating effect of Lake of the Woods. There are extensive patches of Canada Yew (*Taxus canadensis*) present in the island interior, a significant resource, as most of Minnesota’s Canada Yew populations have sharply declined because of land clearing, logging, fires, and increased deer populations.

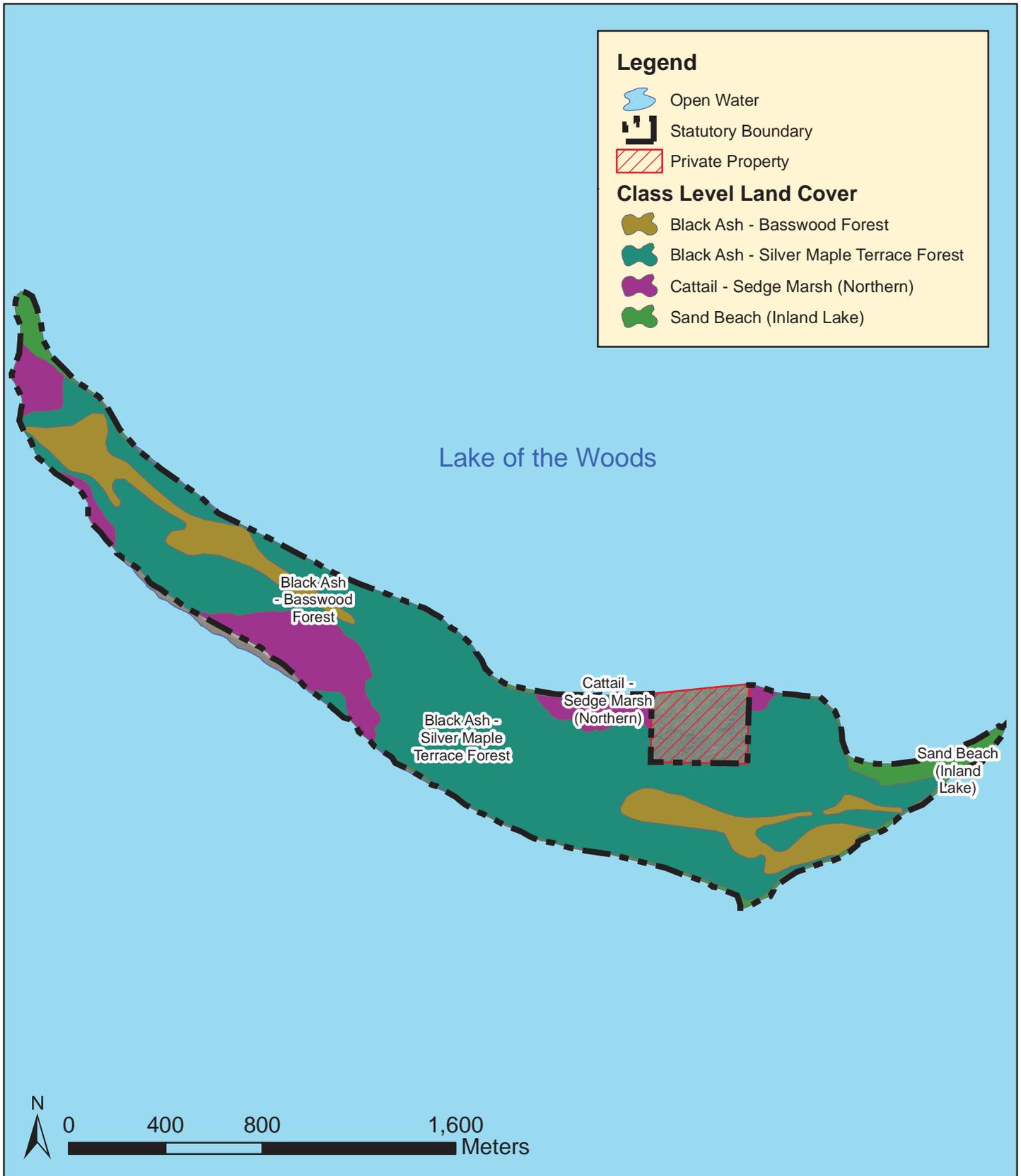


Common moonwort (*Botrychium lunaria*)



Dutchman's breeches (*Dicentra cucullaria*)

¹ High quality is defined in the Division of Parks and Trails Land Cover Quality Ranking Guideline (2007)



Garden Island State Recreation Area

Figure 3: Land Cover

September 2014

Garden Island's beaches are habitat for a variety of shorebirds, which stop and rest and feed during annual migrations. Pelicans, cormorants, gulls, and terns are all commonly seen on the sand spit stretching out to the island's eastern tip.

The island interior offers a variety of habitats ranging from inland open marsh to cedar forest. Much of the overstory consists of bur oak, black ash, aspen, balsam poplar, box elder, elm, spruce, and cedar. Deer, bear, beaver, mink, otter, fox, and snowshoe hare can all be observed on the island. Grey wolves may be seen occasionally in winter months. There are seven bald eagle nests on the island, two of which have a nesting pair each year. The island is one of the few places in Minnesota that has few, if any deer, as evidenced by the robust populations of Canada Yew and other plants vulnerable to overbrowsing.

Lake of the Woods lies in the Hudson Bay drainage basin and straddles the Canada-United States border. This 950,400-acre lake is shared between the Canadian provinces of Manitoba and Ontario, and the state of Minnesota. About 307,010 acres lie within Minnesota.

Exceptional fisheries resources exist within Lake of the Woods, especially walleye, northern pike, and lake sturgeon. Popular sport fisheries of northern pike, walleye, and sauger are found in Lake of the Woods. The size, structure, and abundance of walleye and sauger in this lake make it a premier fishing destination in Minnesota.

The Lake of the Woods-Rainy River system is one of the only places in Minnesota with a sturgeon population healthy enough to support a harvest fishery. Lake sturgeon is listed as a species of special concern in Minnesota. Due to sturgeon's late maturation and slow reproduction, they are prone to over-harvest. To protect the sturgeon population and sustain the recovery of the species, a harvest slot was put in place to focus harvest on sub-adult fish and maintain a sustainable harvest. Fisheries tracks lake sturgeon harvest through a tag and register system.

The sand beaches and shoreline are important as feeding and nesting habitat for the piping plover, which is listed on Minnesota's and the federal government's list of endangered species ([see table 2](#)). The piping plover is a small shorebird related to the common killdeer.

Plovers return to Lake of the Woods in late April after spending winters on the Atlantic and Gulf coasts. Their nests are scrapes in the sand, where four camouflaged eggs are laid in early June. The chicks leave the nests immediately after hatching, and spend the next several weeks

foraging for food. By late August, both the young and adults have flown south.

Piping plover was confirmed nesting on the shoreline of Garden Island during 2006. According to DNR’s rare species guide, this Lake of the Woods population is the only piping plover population that remains in MN and it is at a critically low level with threats from erosion, predation, and human disturbance.

The Inland Lake sand beach native plant community is ranked as critically imperiled (a ranking based on the risk of elimination of the community from Minnesota with critically imperiled as highest risk) and undeveloped shoreline in its natural state is rare throughout Minnesota. Island beaches have been the preferred habitat for piping plover nesting as they provide isolation from predation and disturbance. However, Pine & Curry Islands Scientific and Natural Area (SNA) located on Lake of the Woods, which contain beaches important for piping plover nesting are losing land mass to erosion. This may make the inland lake sand beaches of Garden Island SRA more important as shore bird habitat.

Bald Eagles are known to nest at Garden Island SRA, as well as a large nesting colony of American White Pelicans on an island a short distance away. Red-Shouldered Hawks, Franklin’s Gull, and Common Terns are occasionally present on the island. There was a possible sighting of a Wilson’s warbler in 2007.

Table 2: Endangered, Threatened, and Special Concern Species

Common Name	Scientific Name	Status
common moonwort	<i>Botrychium lunaria</i>	MN_T
Mingan moonwort	<i>Botrychium minganense</i>	MN_SC
piping plover (great plains population)	<i>Charadrius melodus</i>	MN_E FED_E
red-shouldered hawk	<i>Buteo lineatus</i>	MN_SC
common tern	<i>Sterna hirundo</i>	MN_T
American white pelican	<i>Pelecanus erythrorhynchos</i>	MN_SC
lake sturgeon	<i>Acipenser fulvescens</i>	MN_SC
Franklin’s gull	<i>Leucophaeus pipixcan</i>	MN_SC

MN_E = Minnesota Endangered, MN_T = Minnesota Threatened, MN_SC = Minnesota Special Concern, FED_E = Federally Endangered, FED_T = Federally Threatened.

Other than small populations of Reed Canary Grass and Canada thistle, there are no terrestrial invasive plants present on Garden Island at this time. Spiny Water Flea (*Bythotrephes cederstroemi*) was discovered in



An adult common tern sits on her nest.

Lake of the Woods in 2007. The population has become well established throughout the lake. Rusty Crayfish (*Orconectes rusticus*) can be expected in the water surrounding Garden Island. Rainbow smelt were found in the system in 1990 (Lueth, C., Weir-Koetter, C., Radford, D. 2013).

Resource management is a challenge, given the island's location and the difficulty in reaching it. Overall, the resource management goal is the same as across the rest of the state park and SRA system – to protect existing natural resources as needed, and to restore and maintain species as possible.

Natural Resource Recommendations

1. *Preserve and protect the natural resources of Garden Island State Recreation Area.*
 - *Conduct surveys for select mammals, reptiles, and amphibians as funding allows.*
 - *A resource assessment will be completed prior to all proposed development projects to ensure impacts to high quality natural resources at Garden Island SRA are avoided or mitigated.*
2. *Provide active management of vegetation resources in order to maintain high quality native plant communities (NPC) found at Garden Island SRA.*
 - *All NPC mapped polygons are ranked high quality. Efforts to retain the high quality resources of the island will focus on keeping the island free of invasive species and maintaining the current deer population.*
 - *Provide stringent review of impacts to resources from proposed development projects through resource assessments.*
3. *Manage for the advance of Emerald Ash Borer (EAB) in accordance with Parks and Trails Ash Management Guidelines (PAT 3/23/2014). There is some hope that EAB may bypass Garden Island due to its remote and isolated location. EAB infestation of Garden Island would change the complexion of the island, but replacement species already present will likely fill the gaps created by the loss of ash with little/no assistance. Animal herbivory will need to be carefully monitored in such a situation and may require management.*

8. Cultural Resources

Inventory

The small size of the island belies its long cultural history. Humans have inhabited the Lake of the Woods region for at least 8,000 years, thriving on its rich fishing, hunting, and wild rice. The lakes and rivers have long been part of trading networks that stretched from the Great Plains to the Atlantic by way of the Great Lakes.

European explorers and fur traders entered the area in the late 1600s, building trading posts along the Rainy River and the shores of the lake. Visitors to the area can see an example of the trading post at the reconstructed Fort St. Charles on Magnuson's Island in the Angle Inlet, 12 miles from Garden Island. The fort was the longest held by the French in North America, abandoned by 1749. Pierre Gaultier de Varennes, sieur de Verendrye managed exploration work that opened up the west and the north from the fort. The area was contested: Verendrye's oldest son led a mission south but never got to the mouth of the Rainy River, as their exploring party of 25 was killed by Sioux Indians. The deaths occurred on what is now known as Massacre Island, although the bodies were brought back to Fort St. Charles for burial. The fort's location was found in the 19th century through letters sent home to France by the priest who was killed. The fort site is maintained by Knights of Columbus of Minnesota and Manitoba.

Shaw-Shaw-Wa-Be-Na-Se, translated "the Falcon," was the native name of John Tanner. Born in 1779 to a pioneer family in Kentucky, Tanner was kidnapped at the age of ten by Shawnee Indians. He was later rescued from them and raised by an Ottawa woman. He grew up around Lake of the Woods and spent much of his time at Garden Island. Known as a great hunter and trapper, he sold furs and hides to local trading posts. Although he was later reunited with his family in Kentucky, he chose to return to Lake of the Woods. His life was rich in travel and adventure, which he recounted in an autobiographical narrative that made him nationally known in the 1830s. In it he frequently mentions working on gardens at this island.

Gardens were still in existence at Garden Island until at least the early 1900s. LeVerendrye recorded in his journal in 1734, that "I have induced two families of Indians, by earnest solicitations, to sow maize. I trust that the benefits they will derive therefrom will induce others to follow their example." When Simon J. Dawson, an explorer and surveyor, stopped on Garden Island, he was amazed to see a well-cultivated

"My family owned the bulk of Garden Island (the part that wasn't owned by the Red Lake tribe of Ojibwe) from the late '50s into the '90s. We traveled there by boat-- my father conducted the Out-Island Clinic on the boat during the '60s and early '70s. There had been a big old house on the island, built by Booth Fisheries in the 1920s and papered on the inside with cartoon pages from 1920s newspapers-- we put a new roof on that house one summer in the mid-1960s, working with my mother's brother and his family. Supposedly the house was built of tamarack wood and hence rot-proof."

Ann Klefstad, Duluth MN, July 2013



garden on the east end of the island. He reported to Parliament that it included a cornfield of at least five acres and another three acres of pumpkins, squash, and potatoes.

Native Americans were known to have walked to Garden Island from Warroad, following the shore of the lake. Subsequent European visitors commented on the gardens found there (MNDNR 2013b). The construction of the Kenora dam later raised the lake level and ended this access. The Red Lake Band of Ojibwe Indians continues to own about 40 acres of the island.

Commercial fishing began on Lake of the Woods in the 1880s. Garden Island supported several fishing operations beginning around 1915. Whitefish and sturgeon were the first species harvested but, as their numbers declined, commercial fisheries switched to walleye, sauger, and northern pike. The largest fishing operation on the island was the Boothe Fishery located at the eastern end of the island. It included a large fishery house, a bunk house for the men who worked there, a manager's house, an ice house that stored lake ice packed in sawdust for keeping the catch cool, and a 70-foot dock. The commercial fishery remained viable until the State of Minnesota bought out the commercial licenses from the fishery owners in 1985.

Today Garden Island is primarily a destination for sport fishing or boaters who want to explore the lake. Development is limited to a composting toilet, two pit toilets, docks, shelter, and picnic tables. Camping is not allowed and there is no running water.

Cultural Resource Recommendations

- 1. It is likely that archaeological sites will be found in other locations within the state recreation area boundary. Archaeological assessments will be conducted as part of resource assessments prior to the development of new facilities, trails, or other structures to prevent or mitigate disturbance to cultural resources.*
- 2. As funding is available, encourage exploration of the recreation area for cultural resource sites.*
- 3. Work collaboratively with partners to interpret the recreation area's unique cultural resources.*

9. Interpretive Services

Current interpretive services at Garden Island State Recreation Area consist of non-personal (self-guided) interpretation. This is consistent

with funding and staffing levels, as well as the unit's designation as part of the Rustic investment group in the Parks and Trails System Plan.

Existing information boards allow visitors to learn about the natural and cultural history of the SRA and surrounding area. There is no personal interpretation at Garden Island State Recreation Area.

Interpretive Services Recommendations

1. *Update the Park Unit Interpretive Plan (PUIP) for Garden Island State Recreation Area. Within the PUIP, develop themes that identify relevant natural and cultural resource stories.*
2. *Regularly assess and update non-personal interpretation in the SRA, focusing on SRA themes, as funding allows.*

10. Recreation Management and Operations

Recreational Use and Visitor Facilities

Garden Island SRA is a refuge for boaters in the summer and snowmobilers in the winter. It lies along the Ballard snowmobile trail, about 35 miles from Baudette. The snowmobile trail continues up to Oak Island and the Angle Inlet. A shelter on Garden Island near this trail offers a place to take a break and escape the winter wind. A snowmobile trail from Warroad to the Angle Inlet also runs past the island's western tip.

This plan proposes to continue operations as currently underway to accommodate short visits by day-trippers, in winter or summer. Garden Island SRA is a popular destination for shore lunch for area fishing guides, launch services, and resorts. Tourism observers estimated that four to six groups of launches visit the SRA daily from mid-morning to early afternoon in the open water season. This estimate suggests that up to 150 people per day could be visiting the island.

There is a need to continue to explore and implement strategies that enable this use, but without overwhelming the island's limited physical and fragile ecological features. This means finding ways to allow launches as well as individual boats to land, and to assure that visitors practice ecological etiquette and leave the island as they found it, without leaving refuse or disturbing resources. For example, there is a container for disposal of cooking oil. Garden Island is a public resource whose continued use is dependent on visitors using it as a shared resource.

Recreational Use and Visitor Facilities

Recommendations

- 1. Provide docks to allow private boats and commercial launches to safely land.*
- 2. Provide shore lunch facilities including picnic tables, fire rings and toilet facilities to ensure safe, sanitary conditions.*
- 3. Provide small shelter to protect visitors from the elements. Consider upgrade or replacement of existing shelter.*
- 4. Evaluate opportunities for limited overnight use in the future. This may include shore camping and/or backpack campsites on the islands interior.*
- 5. Evaluate equipment needed to maintain docks and provide safe method to set and reset docks.*
- 6. Any development planning must carefully consider the critically imperiled native plant communities and other resource concerns on this remote island. Resource assessments will be conducted prior to the development of new facilities, trails, or other structures to prevent or mitigate disturbances.*

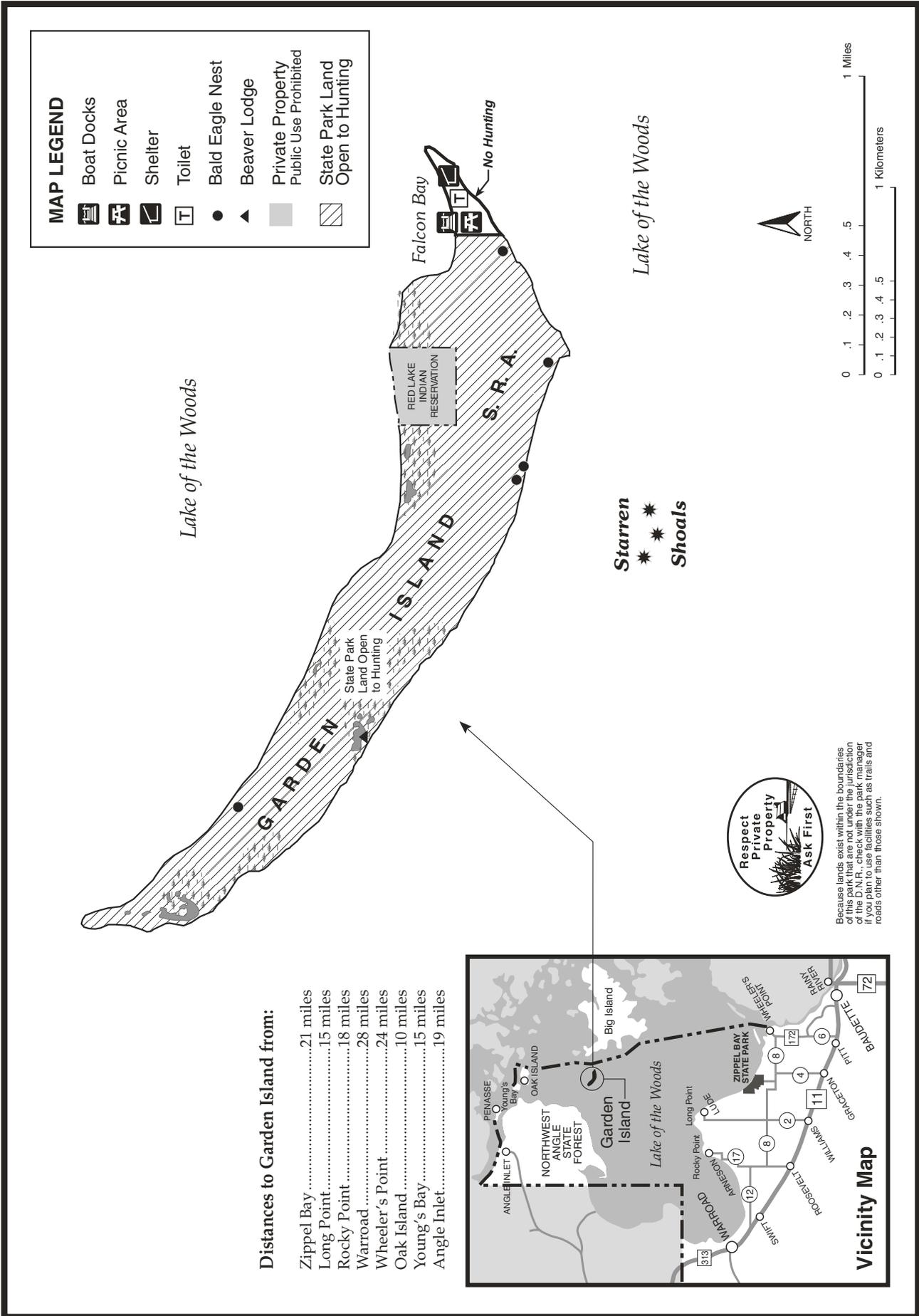
The time frame for implementing these recommendations is not determined and may vary. Implementation of recommendations in this plan is contingent on addressing natural and cultural resource issues, statewide priorities, fit with the Division of Parks and Trails System Plan, and availability of funding.

State Recreation Area Operations

Big Bog State Recreation Area manages several other division units in the Northwest region of the state, including Garden Island State Recreation Area, Zippel Bay State Park, Franz Jevne State Park, Blueberry Hill Forest Recreation Area, Faunce Forest Recreation Area, Manitou Rapids wayside rest, and various water accesses. The Park Manager stationed at Big Bog SRA is manager of all these units. Zippel Bay State Park's park technician and four seasonal workers also work at Garden Island SRA maintaining facilities and managing natural resources.

Use of Garden Island SRA is limited to day use by boaters in the warm weather season and snowmobilers in the winter. The need for staff is minimal. There is no one with enforcement authority on site.

Figure 4: All Season Map



This plan does not recommend any immediate changes to the current operations and staffing. Operations and staffing needs would need to be reevaluated if new recreational use projects are proposed. Decisions related to operational activities and funding will also be guided by the Parks and Trails System Plan and division management structure.

State Recreation Area Operations Recommendations

1. *Ensure that operations hours are available to implement visitor facilities and maintenance activities.*
2. *Monitor use and development to ensure proper staffing.*
3. *Ensure that resource management hours are available to implement the resource management activities.*
4. *Periodically evaluate management structure to determine correct management staffing.*

11. State Recreation Area Boundary

The Minnesota State Legislature establishes state park and recreation area boundaries. The statutory boundary defined in Minnesota Statutes provides staff, citizens, and policy makers with a common understanding of which lands are appropriate for inclusion in the park or SRA. Lands are included within a statutory boundary when a landowner has agreed to inclusion. The DNR is then authorized to negotiate with willing sellers for acquisition of lands contained within that statutory boundary. The landowner retains full ownership and rights to the land within the statutory boundary. Boundary modifications are considered during state park and SRA management planning processes. Although a state park or SRA management plan can recommend boundary changes, only the Minnesota State Legislature can change state park boundaries.

The Garden Island State Recreation Area statutory boundary includes 773 acres on portions of five islands. DNR owns 734 acres, entirely on Garden Island, though the actual acreage of land area varies due to lake level, sedimentation, and erosion. Red Lake Band of Ojibwe own approximately 40 acres on Garden Island which is not included in the SRA statutory boundary. Four small outlying islands make up the remaining acreage within the statutory boundary, and are held by other interests including the U.S. Bureau of Land Management.

12. Plan Modification Process

State park management plans document a partnership-based planning process, and the recommended actions resulting from that process.

These comprehensive plans recognize that all aspects of park management are interrelated and that management recommendations should also be interrelated.

Over time, however, conditions change that can affect some of the plan recommendations or occasionally an entire plan. Plans need to acknowledge changing conditions and be flexible enough to allow for modifications as needed.

Plan Amendment

The DNR Division of Parks and Trails has adopted processes for plan amendments (major changes) and plan revisions (minor changes), which are coordinated through the division's planning section. A plan amendment will be completed to address changes that would vary from the approved management plan.

The Plan Amendment Process consists of five steps:

1. The existing plan is reviewed at the park and regional levels to determine which stakeholders are potentially impacted by a resource condition or proposed change.
2. If the proposed change involves other DNR divisions, the issue should be resolved by staff of involved divisions and approved by the division directors.
3. If the proposed change involves other state agencies, the issue should be resolved by staff and approved by the appropriate division directors from all involved agencies.
4. If the proposed change is potentially controversial among elected boards, user groups or the public, a citizen advisory committee should be established to address the proposed change. A locally advertised open house will be held to encourage public input on the matter, after which point the DNR Division of Parks and Trails division director will determine whether the proposed change should be reviewed by the department.
5. All plan amendments will be coordinated, documented and distributed by the DNR Division of Parks and Trails planning section.

Plan Revision

If a plan change is recommended that does not meet the amendment criteria above, and generally follows the intent of the plan, the DNR Division of Parks and Trails has the discretion to modify the plan without a major planning process.

Plan revisions related to physical constraints and resource protection

Detailed engineering and design work may not allow the development to be completed exactly as it is outlined in the plan. A relatively minor modification, such as moving a proposed building site to accommodate various physical concerns, is not uncommon. Plans should outline a general direction and document the general “area” for development rather than specific locations. For the most part, plans are conceptual, not detail-oriented. Prior to development, proposed development sites are examined for the presence of protected Natural Heritage Program elements and historical/archaeological artifacts. If any are found, the planned project may have to be revised to accommodate the protection of these resources.

Program Revisions

The resource management section and interpretive services sections of the plan should be updated periodically as needed. The DNR Division of Parks and Trails’ resource management and interpretive staff will determine when an update is needed and coordinate the revision with the DNR Division of Parks and Trails planning section.

13. Bibliography

- Davenport, M., et al. (2011) *Minnesota’s Network of Parks & Trails: An Inventory of Recreation Experience Opportunities in Minnesota: Northwest Region Profile*. Minneapolis, MN: University of Minnesota Center for Changing Landscapes.
http://ccl.design.umn.edu/documents/Northwest_Profile_2011.pdf
- Kelly, Tim. (2009). *Boating in North Central Minnesota: Status in 2008 and Trends Since 1985*. Saint Paul, MN: Office of Management and Budget Services, Minnesota Department of Natural Resources.
http://files.dnr.state.mn.us/aboutdnr/reports/boating/boating_ncmn_report_08.pdf
- Kelly, Tim. (2013). *Results of 2012 Minnesota State Park Visitor Survey*. Saint Paul, MN: Minnesota Department of Natural Resources.
http://files.dnr.state.mn.us/aboutdnr/reports/parks/2012_park_visitor_report.pdf
- Lueth, C., Weir-Koetter, C., Radford, D. (2013) *Garden Island SRA Unit Plan for Natural & Cultural Resource Management 2013-2019*. Bemidji, MN: Minnesota Department of Natural Resources, Division of Parks and Trails.
- Minnesota Department of Natural Resources. (2013a) *Destination Minnesota: A New Direction for Minnesota State Parks and Trails*. Saint Paul, MN.
http://files.dnr.state.mn.us/aboutdnr/reports/legislative/2013_destination_minnesota.pdf

Garden Island State Recreation Area Management Plan

Minnesota Department of Natural Resources. (2013b) *Garden Island State Recreation Area*.

http://www.dnr.state.mn.us/state_parks/garden_island/index.html

Minnesota State Demographic Center. (2013) *Minnesota Population Estimates*. Accessed September 5,

2013: <http://mn.gov/admin/demography/data-by-topic/population-data/our-projections/>