

Pentwater State Game Area Master Plan
Michigan Department of Natural Resources



**Wildlife Division
Peter J. Kailing
September 27, 2016**

Contents

Pentwater State Game Area Master Plan Michigan Department of Natural Resources..	1
Intended Purpose and General Management Direction	3
Background	4
Wildlife Species	5
Existing Conditions	5
Recreational Use	6
Impacts on the Local Economy	7
Management Direction	7
Goals, Objectives, and Management Actions.....	8
Acquisition and Disposal of Land	14
Plan Review	14
Approvals	14

Intended Purpose and General Management Direction

The Pentwater State Game Area (PSGA) is comprised of 2,540 acres just south of the Village of Pentwater, in Oceana County. The game area is located within three townships: Pentwater Township (T16N, R18W), Weare Township (T16N, R17W) and Golden Township (T15N, R18W). Figures 1, 2 and 3 depict the game area location, habitat cover types and game area boundaries.

The Pentwater River Marsh is the centerpiece feature of this game area and is comprised of approximately 500 acres of stream and emergent wetlands at the mouth of the Pentwater River where it empties into Pentwater Lake. Pentwater Lake then empties into Lake Michigan through a short channel bordered in part by the Charles Mears State Park. The channel was excavated in the 1850s to allow ships into Pentwater Lake. Three rivers converge at the Pentwater River Marsh. These include the North and South Branches of the Pentwater River, and Watson Creek, which is a small cold water stream that flows into the North Branch of the Pentwater River.

The majority of the land for the PSGA was acquired between 1958 and 1963. Four sources of funding were used in securing this land. Most of the funding came from Pittman-Robertson (PR) monies. The other three sources included gifted properties, exchanged land and a small amount of tax reverted acreage. In 2003 approximately 2,000 acres of state forest land south of Pentwater Lake was incorporated into the original 500-acre game area. The 2,000 acres of state forest land were acquired as tax reverted parcels in the 1930s. The Pentwater SGA today is comprised of 2,540 acres.

Wetland dependent wildlife such as waterfowl were a priority when the game area was first created. The transfer of 2,000 acres of state forest land to game area, which is mostly upland forested habitat, has shifted the importance of the game area to include popular current uses such as hunting for white-tailed deer, grouse, turkey and small game such as squirrel and rabbit. Waterfowl hunting is limited on the marsh and lake due to high density housing on private riparian lands, but hunting does occur for wood duck, mallards and Canada geese. Fishing for salmon and rainbow trout is popular in the late summer and fall while perch fishing is popular on Pentwater Lake during the winter.

Access to the game area is good, as multiple public roads exist on the perimeter and bisect portions of the game area. Also, a number of primitive trails are located on the game and are used by motor vehicles. ORV use on these trails, however, is prohibited.

This master plan covers a 10-year period for field operations at the SGA, while considering how our management will contribute to the long-term (50-100 years) sustainability of important wildlife populations and their habitats.

The Pentwater Pathways Cross Country Ski Trail is located on the PSGA. It existed on the old state forest property that was incorporated into the game area. The ski area offers groomed ski trails but has no other developed facilities on the game area. It operates on an annual use permit issued by the local wildlife office in Paris, MI. No mountain biking or other uses are authorized on the ski trails except cross-country skiing. Wildlife habitat management and hunting is not limited by the presence of the ski trail.

The Charles Mears River Farm Barn is a historical barn on the game area that was constructed in approximately 1862. This highly visible barn is located on Business U.S. 31 just west of the U.S. 31 Pentwater Exit. The Department of Natural Resources took possession of this structure and adjoining property in 1957. In 1959, the Michigan Conservation Commission approved use of the building (not the property) as a storage facility for Mears State Park. The barn remains on inventory with Michigan Parks and Recreation Division and it continues to be used for seasonal equipment storage. The local Pentwater Historical Society conducts occasional restoration and maintenance on the barn in accordance with special use permits issued by Wildlife Division.

A popular boat ramp and parking area accessing the North Branch of the Pentwater River (and Pentwater Lake downstream) is located along Business U.S. 31. The ramp is suitable for kayaks or small craft only as the water is shallow at the launch. Recent improvements included paving the lot. A portable restroom in the parking area is maintained by Weare Township.

Background

At a local level, this plan helps fulfill goals and objectives of other higher level Department and Wildlife Division plans and initiatives. The Department goals (protect natural resources, sustainable recreation, strong natural resource-based economies, and strong relationships and partnerships), the Wildlife Division's Guiding Principles and Strategies (Goal 2-Manage habitat for sustainable wildlife populations, Goal 4-Increase public participation in hunting and trapping), More Bang For Your Buck concepts (outstanding grouse, woodcock and turkey hunting, challenge of small game hunting, and great diversity of high quality waterfowl hunting), Wildlife Action Plan (WAP) the Division's Southwest Regional Operational Plan, Southwest Region Habitat Guidance documents, and the Southwest Region Land Management Plan are all reflected in this master plan.

Wildlife Species

We will continue to focus our efforts on species and habitats that help meet our goals to provide quality hunting opportunities and our other public trust responsibilities. Wildlife species that will be specifically addressed to meet our planning goals are listed in Table 1.

Table 1. A list of species or projects to be worked on during this planning period, reflecting opportunities for habitat or recreational management.

Common Name	Featured Species	T&E, SC Species	Climate Change Vulnerable	Remarks
White-tailed Deer	X			Openings, food plots, mast trees, young forest
Ruffed grouse	X		X	Young forests, aspen
Wild turkey	X			Openings, food plots, mast trees, young forests,
Wood duck	X			Wooded floodings, shrub wetlands, mast trees, nesting cavities

Ruffed grouse and aspen are both predicted to be climate change vulnerable which may impact our ability to effectively meet our desired future conditions outlined in Goal 1 (see below). We will monitor aspen regeneration as part of routine forest inventory and consider alternatives to aspen, as necessary. In general, younger forests are better able to withstand climate shocks and lowering the average age of forested area is likely a good adaptation strategy.

Existing Conditions

The PSGA consists of two distinct habitat types. The first habitat type includes the Pentwater Marsh and the streams coming into it which form an emergent wetland system that is home to a variety of waterfowl and shorebirds. This emergent wetland vegetation community is ecologically classified as “Great Lakes Marsh ” and is relatively uncommon along the heavily developed Lake Michigan Shoreline. The Long Bridge Road causeway on the upper end of Pentwater Lake forms an abrupt transition from emergent wetland on the upstream side of the causeway to open water of Pentwater Lake on the downstream side of the causeway. The Great Lakes marsh complex is comprised of cattails and hummock sedge species with patches of reed canary grass and smaller patches of invasive non-native phragmites. The phragmites pockets have been successfully reduced with a combination of herbicide treatment (2015, 2016) and

a prescribed burn (2015). This is the first time the marsh has been burned in recent memory. The purpose was to help reduce invasive plant species (phragmites) and encourage native wetland vegetation to flourish. Various species of waterfowl, such as Canada Geese and mallards, make use of the Pentwater Marsh and Pentwater Lake during different seasons. Wood duck hunting in the backwater areas is popular.

The more common second habitat type of the PSGA, however, consists of forested cover on rolling hills of very sandy soils that are typical along the Lake Michigan shoreline. Three cover types make up the majority of the game area upland habitats, including: aspen stands, oak stands (red, white and black) and mixed upland deciduous (including red maple, beech, oak, and ash). These stands of timber are of various age classes due to past logging activities. Some common wildlife species on the game area in these habitats include white-tailed deer, grey squirrel, ruffed grouse and turkey.

There is a mix of lowland hardwoods and softwoods in the floodplain of the game area waterbodies and in isolated low areas. Wildlife utilizing this habitat includes ruffed grouse, migrating wood cock, and white-tailed deer. Mixed red pine and white pine are scattered throughout the game area. Table 2. identifies the major habitats within the PSGA. Current natural community ecological surveys have not been completed at this time for the PSGA.

Table 2. Current cover types on the Pentwater River (based on MiFi surveys from 2014).

Cover type	Acres	Percent of Game Area
Mixed Upland Deciduous	635	25%
Oak	566.7	22%
Aspen	554.8	22%
Mixed Lowland Deciduous	351	14%
Emergents	175	7%
Lowland Coniferous	97	4%
Other	53	2%
Lowland Shrub	35	1%
Water	33	1%
Bog	23	1%
Mixed Pine	17	1%
Total	2540.5	100%

Recreational Use

The PSGA provides a host of recreational opportunities for local residents and visitors alike including hunting, fishing, trapping, bird watching and wildlife viewing. State game

areas in southern Michigan are under continual pressure for other uses however. Under Federal and State regulations, recreational and commercial uses on the area that are not incidental to our management for the purposes described above are generally not allowed. Some of these uses can be allowed, under the following circumstances:

1. The uses do not interfere or conflict with the wildlife conservation purposes of the area described above.
2. The Department has no obligations to determine if requested uses would conflict or interfere; the burden of determining must remain with those requesting the uses.
3. The requested uses cannot be exclusive of other allowable uses and must not result in the Department losing management control of any portion of the area.
4. A lack of a specific prohibition in rules and regulations for the area does not constitute approval of the activity.
5. The Department always reserves the ability to disallow activities previously allowed as wildlife conservation needs dictate.

Additionally, the Department will continue to monitor any existing commercial and recreational uses for interference with the intended purposes of the area as described in this plan.

Impacts on the Local Economy

Contributions to the local economy resulting from activities on the game area include periodic timber management activities through contracts with local loggers, plus thousands of hunting, fishing, trapping and recreational user days per year that provide a direct boost to local restaurants, sporting goods stores, convenience stores and gas stations.

Management Direction

The desired future condition for the PSGA outlined in Table 3.

Table 3. Desired future condition of cover types and habitat issue direction on the Pentwater SGA.

<i>Cover type and Habitat Issues</i>	<i>Desired Future Condition</i>
Oak	Maintain
Northern Hardwoods	Maintain
Mixed Upland Deciduous	Increase
Herbaceous Open land	Maintain
Natural Pines	Decrease
Planted Pines	Decrease
Mixed Upland Conifers	Decrease
Lowland Deciduous Forest	Maintain
Lowland Coniferous Forest	Maintain
Lowland Mixed Forest	Maintain
Lowland Shrub	Maintain
Emergent Wetland	Maintain
Acres of Agriculture	NA
Acres of Aspen	Maintain
Acres of Warm Season Grass	NA
Acres of Herbaceous Open lands	Maintain
Acres of Cool Season Grass	Maintain
# of Forest Openings	Increase
Grassland Patches > 150 Acres	NA
Grassland Patches >250 Acres	NA
Mature Forest	Decrease
Unfragmented Forest	Maintain
Riparian Corridor	Maintain
Great Lakes Marsh EO	Maintain
Unmanaged Wetlands	Maintain

Goals, Objectives, and Management Actions

What follows is the strategic direction for the Pentwater SGA, to be implemented during this planning cycle. This plan describes the **goals** or desired future condition for the area, the **objectives** under each goal and the **actions** associated with each objective are listed below those objectives. Goals come mostly from the featured species and habitat issues relevant to PSGA.

Goal I provide sustainable populations of white-tailed deer, ruffed grouse and wild turkey in the SGA.

Rationale: Deer, grouse and turkey are highly desirable game species and managing for their habitat benefits numerous other wildlife species such as cottontail rabbit and wood cock. Varying age classes of aspen and oak stands provide essential habitat and food for deer, grouse, turkey and squirrels.

Metrics: staff observation and hunter surveys; assessment of aspen trends through time based on forest inventory data, number of suitable forest openings

Objective A. Redistribute aspen cover type on the game area to provide a balance of age classes on a 60-year rotation (14% at age 0-10, 14% at age 21-30, 14% at age 31-40, 14% at age 41-50 and 14% at age 51-60). Harvest aspen in patches that optimizes the spatial arrangement for the benefit of deer, grouse and turkey by 2075.

Action 1. Establish an aspen harvest regime that will improve the aspen type and optimize the age classes and juxtaposition of aspen stands.

Objective B. To provide suitable forest openings (0.1 - 2 acres in size), comprising no more than 5 % of the aspen forested portions of game area for nesting, brood rearing and foraging for grouse and turkey, and provide forbs for deer. Establish all openings and a rotation program to treat opening by 2023. Convert timber harvest landings and trails where possible into openings.

Action 1. Maintain and create small herbaceous openings at appropriate locations throughout the Forested Management Area.

Objective C. Maintain the current extent (~567 acres) of oak cover type on the SGA and balance the age class distribution.

Action 1. Develop and implement an adaptive oak management strategy by 2018.

Action 2. Harvest and or treat approximately 250 acres of oak forest during the next decade.

Objective B. Maintain the oak component in non-oak stands.

Action 1. When managing other forested cover types, including natural white pine stands and red pine plantations, identify opportunities for maintaining the oak component.

Objective C. To maintain suitable forest openings (0.1 – 2 acres in size), on 567 acres for foraging and breeding habitat for wild turkey, deer and grouse.

Action 1. Maintain herbaceous openings/food plots at appropriate locations throughout the Pentwater SGA.

Goal II: Provide sustainable populations of wood ducks on the Pentwater SGA.

Rationale: Wood ducks are popular game species and protecting and maintaining their preferred nesting, brood rearing and feeding habitat along the North and South Branches of the Pentwater River and along Watson Creek will provide waterfowl hunting opportunities. In addition, these forested riparian corridors are habitat to a variety of wildlife species and protect water quality.

Metrics: Staff observation and hunter surveys; assessment of lowland forest types within MIFI.

Objective A. Maintain the current extent of lowland forest and shrub cover type adjacent waterbodies on the PSGA.

Action 1. Do not implement forest management activities in lowland forest and shrub stands immediately adjacent to the North Branch and South Branch Pentwater Rivers, and Watson Creek.

Action 2. Restrict forest management activities in upland stands within 100' of the floodplains of North and South Branch Pentwater Rivers and Watson Creek.

Objective B: Manage emergent wetlands (~175 acres) to provide wetland vegetation and open water areas preferred by wood ducks

Action 1. Monitor (and treat as necessary) unmanaged emergent wetlands for presence of invasive plant species including phragmites and purple loosestrife.

Action 2. Monitor and reduce as necessary mute swans and their nests within the PSGA.

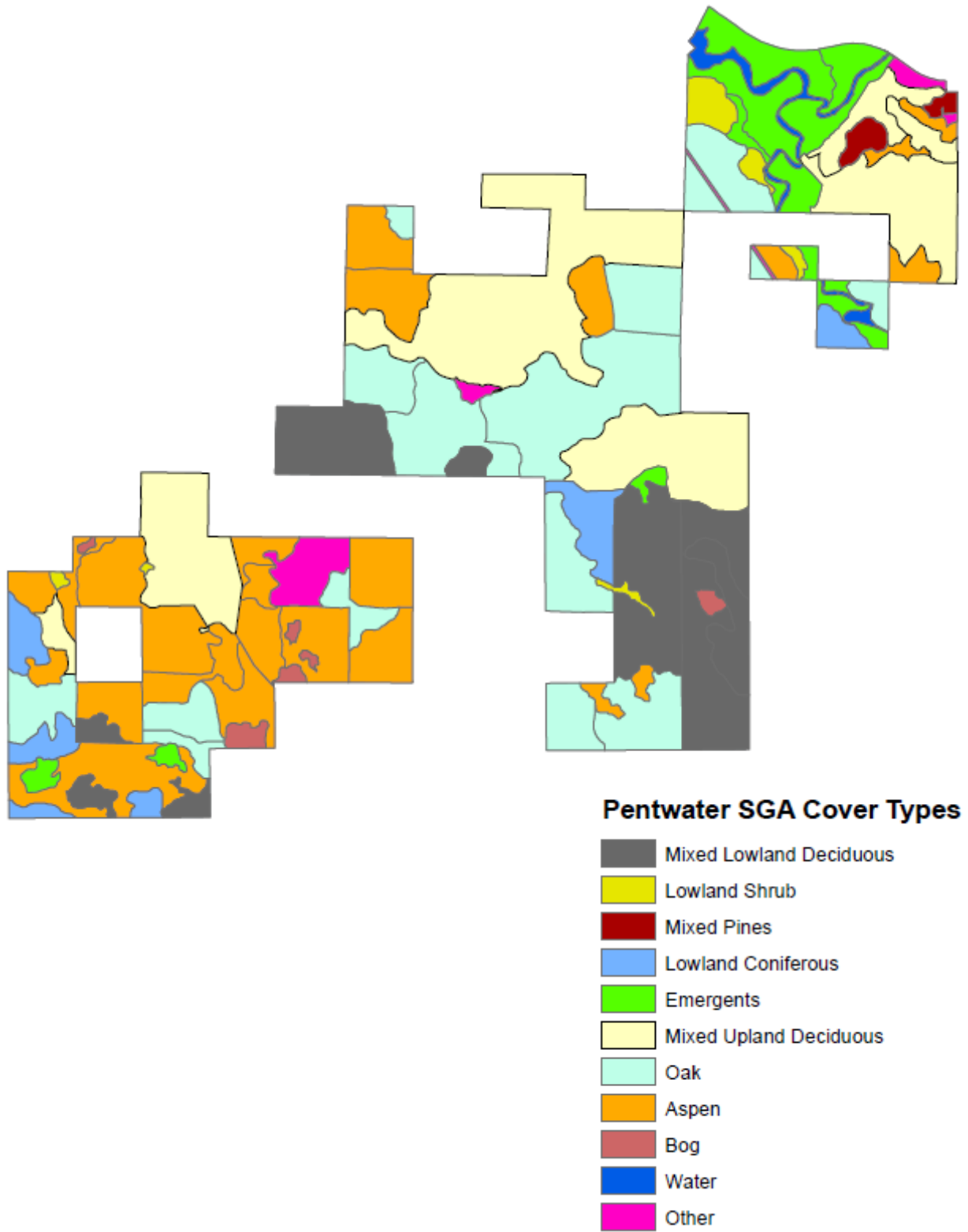


Figure 1. Pentwater SGA Major Habitat Cover Types.

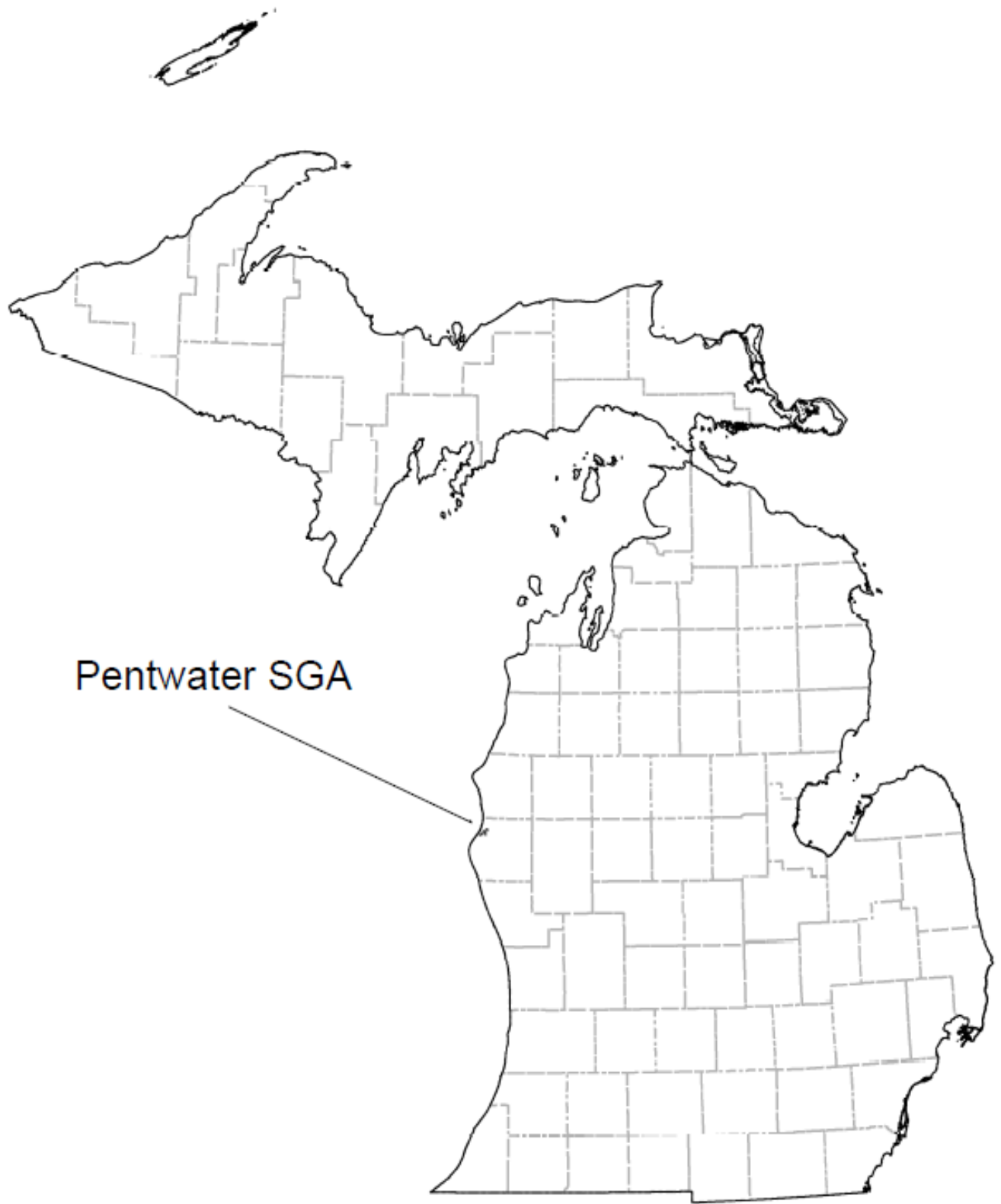


Figure 2. Location of the Pentwater SGA.

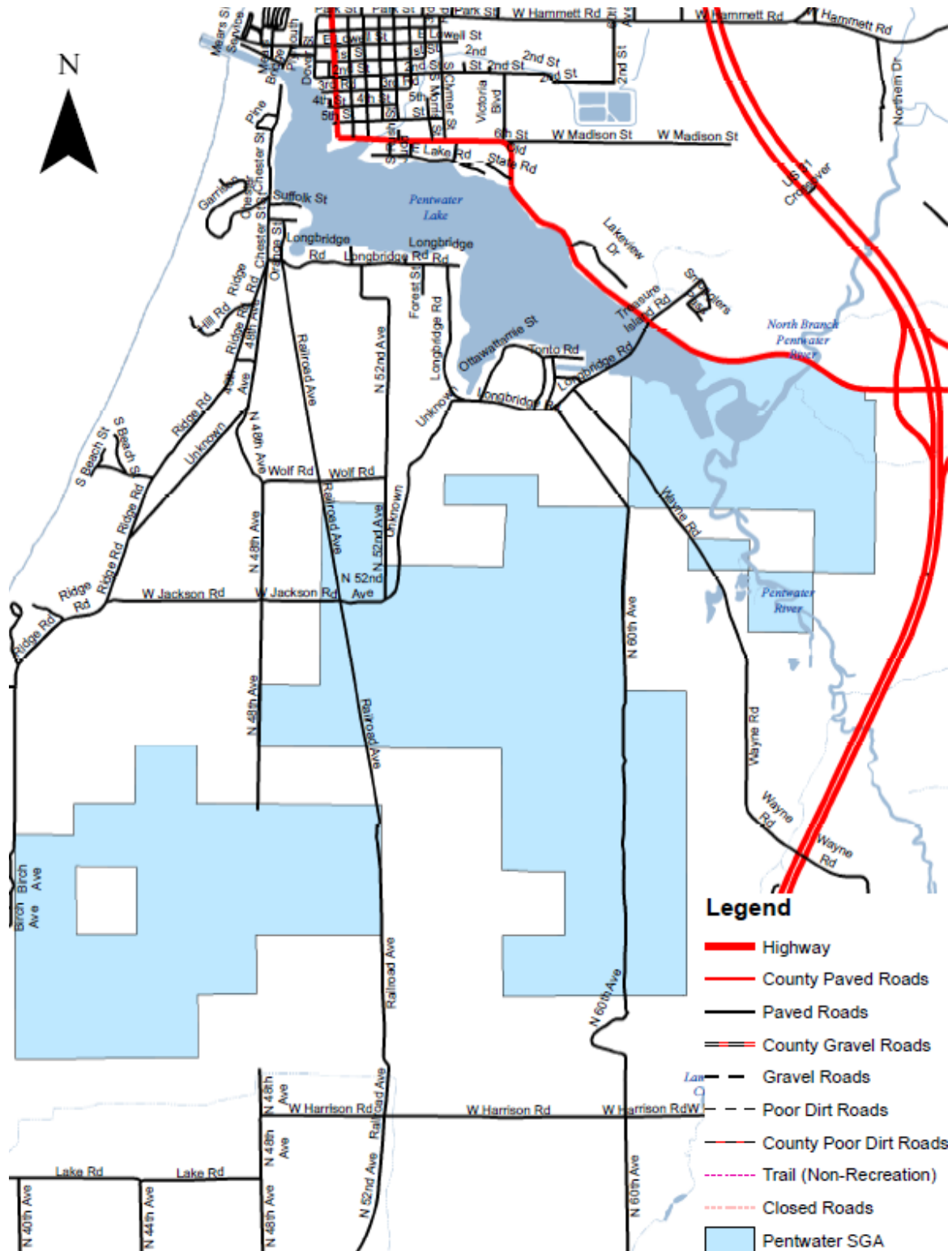


Figure 3. Pentwater SGA Boundaries.

Acquisition and Disposal of Land

This is an important game area that provides a host of recreational opportunities for local resident and visitors. Our overall goal is to continue to provide these opportunities. Since the PSGA is located in southern Michigan and within relatively close distance of the city of Muskegon, the land acquisition strategy for the PSGA is to both fill in state ownership by acquiring available blocks located within and among current state ownership and to expand the area by obtaining appropriate parcels that are outside the current ownership but within the acquisition boundary. Parcels will be evaluated as they become available and will be acquired on a willing seller basis only.

Plan Review

This plan will be available for public review and comment on the DNR website between February 1, 2017 and February 28, 2017. Changes will be made, as necessary, based on public feedback. Once the plan is approved it will be placed on the [DNR website](#), and will be reviewed again within 10 years of the approved date. Send comments to: Pete Kailing KAILINGP@michigan.gov

Approvals

(John Niewoonder), Field Operations Manager

Date

(Mark Sargent), Regional Supervisor

Date