

Osceola-Missaukee Grasslands State Game Area Master Plan



Photo credit: B. Slaughter

MICHIGAN DEPARTMENT OF NATURAL RESOURCES

**WILDLIFE DIVISION
ERIN VICTORY
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Intended Purpose and General Management Direction

In 1972 the first parcels of land associated with what was formerly known as the Prairie Chicken Area were purchased using monies from the Pittman-Robertson Wildlife Restoration Act (P-R) grant, Land and Water Conservation Fund, Recreation Bond Program and donations from concerned citizens. These parcels totaled approximately 990 acres and spread across sections 2, 3, and 14 of Marion Township in Osceola County. The Tustin parcel was also purchased with a combination of P-R and State Game funds, and the two Missaukee County parcels were later purchased using State Game funds. Though these areas were managed intensively to provide habitat for prairie chicken, the species was extirpated from the state of Michigan in the early 1980s.

Located in the Northern Lower Peninsula (NLP) Region (Figure 1), the area, consisting of 5 parcels and 1,266 acres, was formally dedicated as the Osceola-Missaukee Grasslands State Game Area (OMG SGA) by the Natural Resources Commission (NRC) in 2007 as described in an NRC memo to the Director of the Department of Natural Resources. The intent of this dedication was to provide grassland habitat for native species in accordance with the P-R criteria.

P-R funds are a source of federal aid generated from taxes on sporting arms and ammunition and are apportioned to states for the purpose of wildlife population and habitat management, and wildlife-based recreation. Multiple use of areas supported by P-R funding is encouraged, provided it does not interfere with the primary purpose of wildlife management and habitat restoration.

The OMG SGA is a regionally unique area due to its geographic scope, contiguous grassland acres and the diversity of wildlife species it supports. Within a larger intensively cropped agricultural landscape, the grasslands within the OMG SGA are managed less-intensely to emulate natural grassland conditions for the benefit of species like white-tailed deer, wild turkey, and grassland songbirds. This area will continue to be managed to provide a variety of recreational opportunities, including hunting and wildlife viewing, while also serving as a stronghold for grassland obligate bird species, such as the Henslow's sparrow, in the face of climate change.

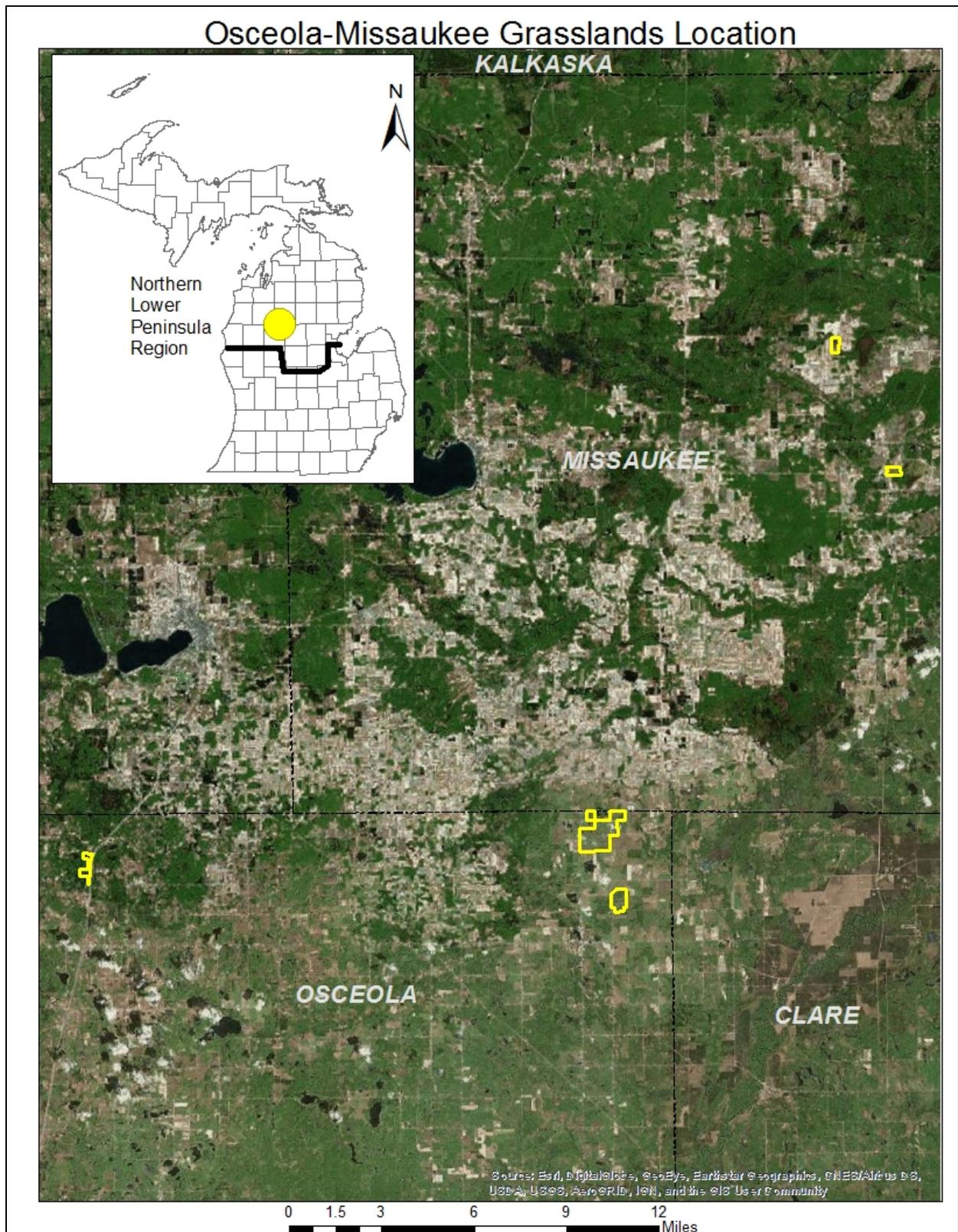


Figure 1. Location of the Osceola-Missaukee Grasslands State Game Area.

Background

This plan incorporates, by reference, the Upper Mississippi River Great Lakes Region Joint Venture Implementation Plan, the DNR Northern Lower Peninsula Regional State Forest Management Plan, and the DNR Wildlife Action Plan by maintaining grassland, marshland, and early successional forest habitat for game and non-game species of conservation concern.

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-Enhance sustainable wildlife-based recreation), More Bang For Your Buck concepts (outstanding grouse, woodcock and turkey hunting, expanding big game opportunities, challenge of small game hunting, and great diversity of high quality waterfowl hunting), and the Division's NLP Regional Operational Plan are all reflected in this master plan.

Additionally, this SGA is considered "in-scope" for forest certification, meaning the area is included within the scope of evaluation under DNR's Forest Stewardship Council (FSC) and Sustainable Forestry Initiative (SFI) forest management certificates. As such, the area is categorized as a Special Conservation Area (SCA), type Wildlife Management Area, indicating wildlife management and recreation are the leading conservation objectives/values guiding management. Activities will follow processes and procedures outlined in the DNR's Forest Certification Work Instructions to ensure compliance with forest certification standards.

Historical Conditions

Heavily influenced by glaciation, the parcels that make up the OMG SGA are characterized by gently rolling till (unstratified glacial drift) or outwash plains (stratified glacial drift). According to General Land Office surveys, which provide a coarse indication of the landscape prior to European settlement, the parcels of the OMG SGA ranged from lowland conifer swamp and emergent marsh to mesic northern hardwood forest types dominated by hemlock or beech and sugar maple. Today, after a century or more of logging, ditching, draining, grazing, agriculture, and intensive management for prairie chickens, these parcels look very different.

Wildlife Species

True to the intended purpose of the game area when it was dedicated in 2007, 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.

Knowledge gaps exist regarding the species that occur on the SGA, or that use these parcels at different times throughout the year. Parcel 1 (Figure 3) is the most visited by staff, and therefore has the most information available on species presence. Birds are the taxonomic group best understood there; however, some mammal species have been documented as well. These include white-tailed deer, striped skunk, and eastern cottontail rabbit. The OMG SGA may be an important fawning area locally, as staff have encountered many fawns hiding in the tall grasses in May and June.

A list of grassland bird sightings by DNR staff (from 2012 to present) are included in Appendix A. On Parcel 1, some highlights include nesting eastern wild turkey and mallard. Other species observations include Wilson's snipe, northern harrier, Henslow's sparrow, bobolink, dickcissel (2012 only), and eastern meadowlark. Additional waterfowl observations include Canada goose and blue-winged teal. Michigan Natural Features Inventory (MNFI) records add short-eared owl and migrant loggerhead shrike as species documented on Parcel 1 at some time in the recent past. Maintenance of the habitats found on the SGA will benefit many of these species over the next 10 years (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, Special Concern Species	Climate Change Vulnerable	Remarks
American woodcock	Yes	No	Increase Likely	Young forests, grassland maintenance
Cottontail rabbit	Yes	No	Presumed Stable	Grassland; brush pile; early seral stage maintenance
Dickcissel	No	Yes	Increase Likely	Grassland maintenance
Henslow's sparrow	No	Yes	Presumed Stable	Grassland maintenance
Mallard	Yes	No	Presumed Stable	Ponds; grassland maintenance
Migrant loggerhead shrike	No	Yes	Presumed Stable	Grassland maintenance
Northern harrier	No	Yes	Moderately Vulnerable	Grassland maintenance
Ruffed grouse	Yes	No	Presumed Stable	Young forests, aspen
Short-eared owl	No	Yes	Presumed Stable	Grassland maintenance
White-tailed deer	Yes	No	Presumed Stable	Grassland; edge maintenance
Wild turkey	Yes	No	Increase Likely	Grassland maintenance

Species at the northern limits of their range, or that rely on grasslands are predicted to be less climate change vulnerable than other species. These include the grassland birds listed in Table 1. Other species such as ruffed grouse and aspen are both predicted to be climate change vulnerable (locally; grouse populations are predicted to shift north). White-tailed deer and wild turkey are expected to benefit from less severe winters under a climate change scenario, though deer may be subject to local population impacts associated with diseases like Epizootic Hemorrhagic Disease that can be exacerbated by a milder climate.

Existing Conditions

The OMG SGA is large (1,266 acres) and consists of a diverse variety of cover types (Figures 3-6) across 5 parcels that provide valuable habitat for wildlife. Vegetation types include old field, emergent wetland, shrub-carr (a persistent successional wetland shrub community), aspen, lowland forests (quaking aspen, black cherry, red maple, black ash), hardwood swamps (black ash, green ash, silver maple, red maple), and a degraded bog.

The SGA is included in the state forest system, and as such, has been routinely inventoried with an emphasis on forested stands every 10 years (Tables 2 and 3). Because the management priority is grassland maintenance and there is little forest resource to manage on the property, this inclusion in the state forest compartment system is no longer relevant and represents a holdover from the status quo prior to the SGA designation. This will be addressed in the management goals.

Given the presence of rare wildlife species on the SGA, a more comprehensive vegetation survey was done by MNFI in 2014 for Parcels 1-4 to better understand plant communities that occur there (Table 4). Parcel 5 wasn't known to be included in the SGA until after this survey was contracted. This survey yielded the first rare plant of record for Osceola County, Vasey's rush.

Invasive species documented on the OMG SGA include reed canary grass, phragmites, bull thistle, autumn olive, and spotted knapweed. Management to reduce the occurrence of these invasives can lead to better recreational opportunity for waterfowl hunting and greater utilization of the site by wildlife.

Parcel 1 is the largest of the five, and has been the focus of grassland management efforts to date. It does not represent a typical grassland, however, as it was historically dominated by wetland cover types and now consists of a network of county drains. As such, much of the grassland areas of Parcel 1 continue to be wet and supports acres of reed canary grass in addition to cool season grasses and non-native forbs. Natural wetlands on the SGA consist of an old beaver flooding, wooded swamp, and shrub-carr community.

Constructed wetlands on Parcel 1 include 6 to 7 ponds created by the Wildlife Division and mitigation wetlands in the northwest corner created by the Michigan Department of Transportation (MDOT) in 1999. These were intended to offset wetland losses during construction of US-131. Permits issued by the Department of Environmental Quality (DEQ) for the 25.5 acre mitigation area require MDOT to maintain 4.8 acres in shrub-scrub and 7.87 acres in emergent wetland. Shrub plantings at this location by MDOT have failed in the past, and the area is now dominated by reed canary grass.

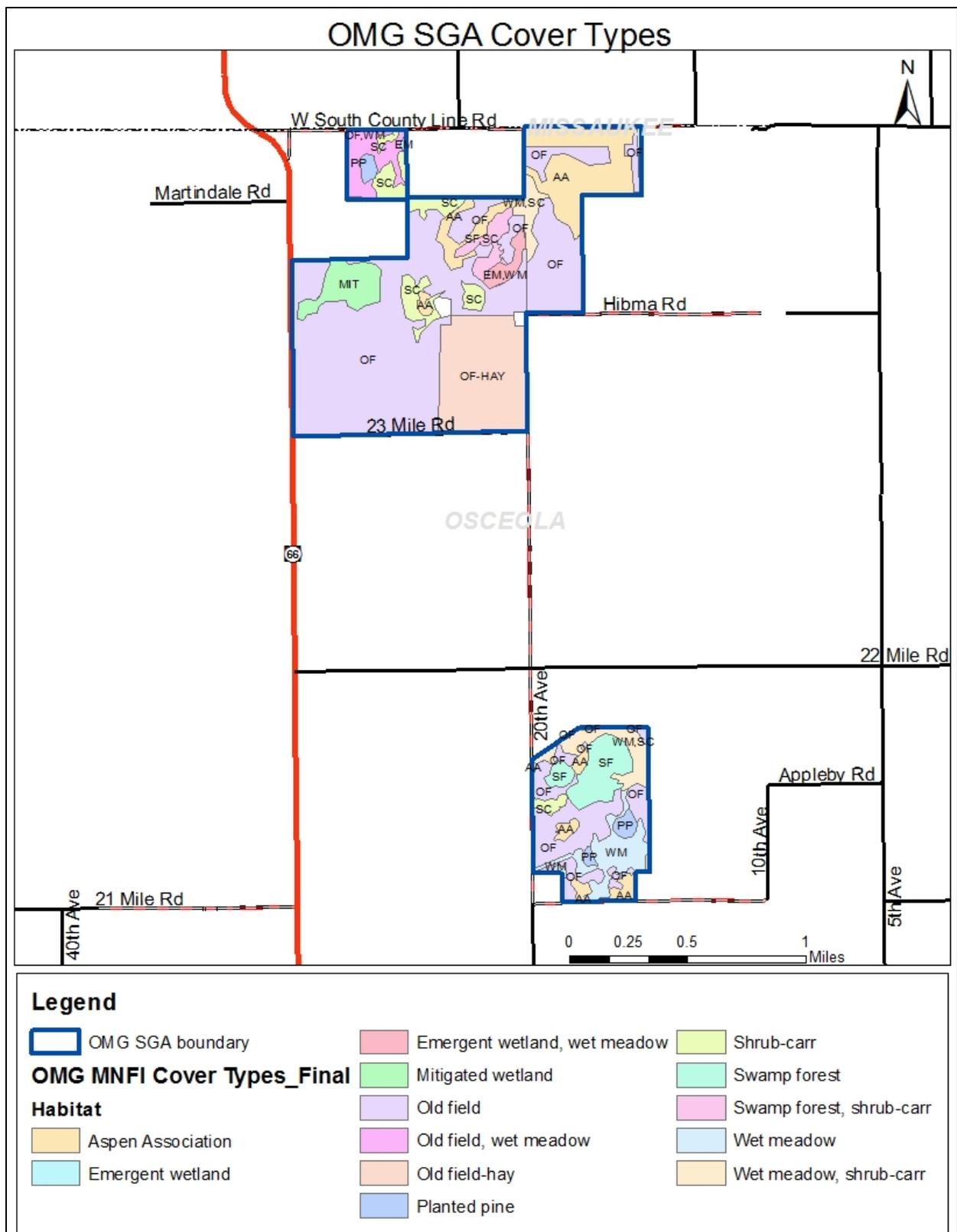


Figure 2. Map representing the major habitat cover type classes in Parcels 1 and 2 (MNFI survey).

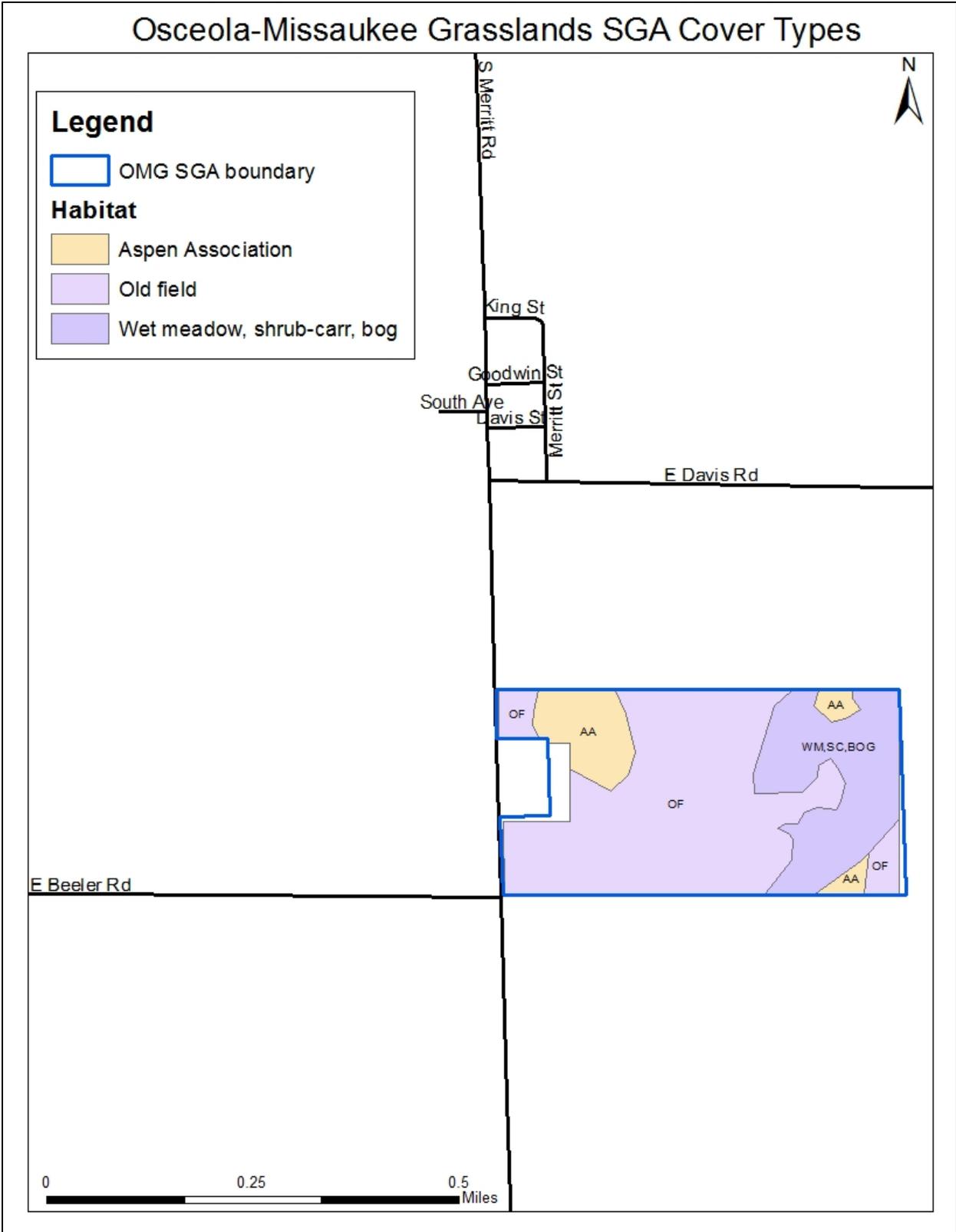


Figure 3. Map representing the major habitat cover type classes in Parcel 3 (MNFI survey).

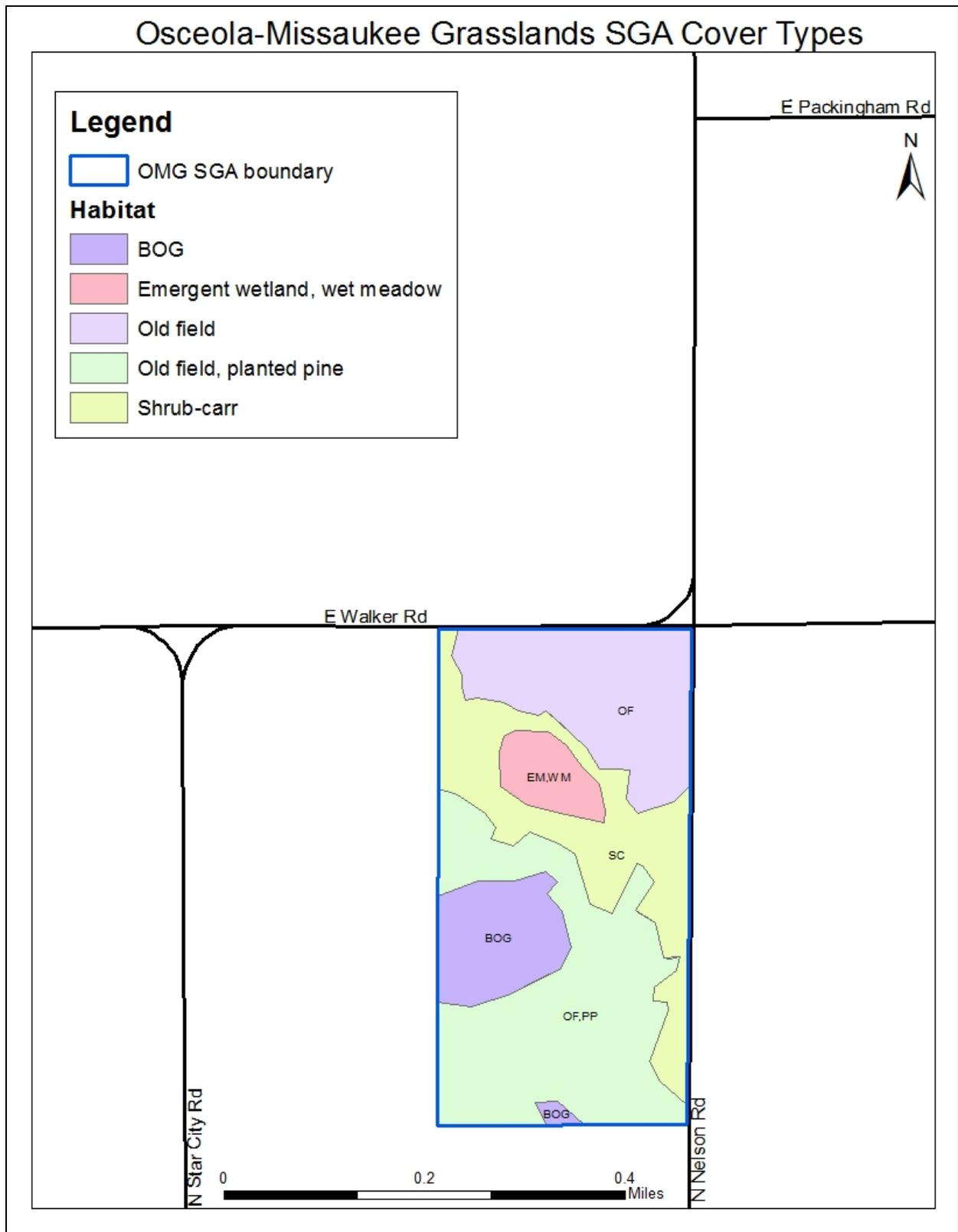


Figure 4. Map representing the major habitat cover type classes in Parcel 4. (MNFI survey).

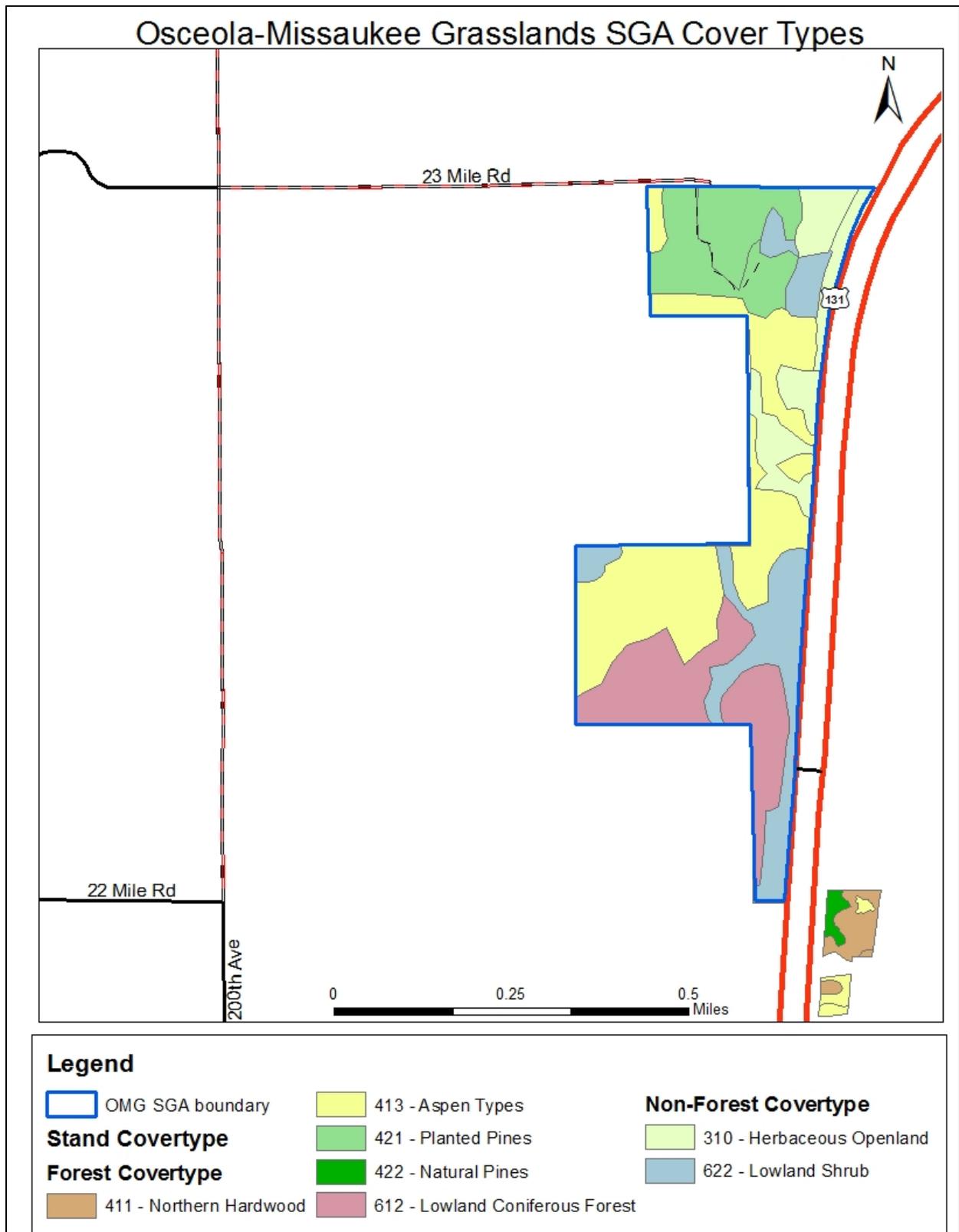


Figure 5. Map representing the major habitat cover type classes in Parcel 5 (DNR forest inventory).

Table 2. Current cover types on the OMG SGA based on state forest inventory done in 2008 and 2010.

Cover Type	Acres	Percent of Game Area
Herbaceous openland	776	62
Lowland shrub	163	13
Upland shrub	18	1.4
Low density trees	51	4.1
Aspen	138	11
Lowland deciduous forest	8	0.6
Lowland coniferous forest	25	1.9
Bog	22	1.8
Planted red pine	18	1.4
Natural pine	6	0.5
Cattail	26	2.1
Total	1251	

Table 3. OMG SGA parcels by Compartment in the State Forest system.

OMG SGA Parcel	Compartment Number	Last Inventoried	Next Year of Entry
Parcel 1	45	2008	2020
Parcel 2	45	2008	2020
Parcel 3	59	2010	2022
Parcel 4	59	2010	2022
Parcel 5	36	2008	2020

Table 4. Current cover types on the OMG SGA based on MNFI vegetation surveys done in 2014 (excludes parcel 5).

Cover Types	Acres	Percent of Game Area
Aspen Association	124.2	11
Bog	9.5	0.8
Emergent Wetland	0.9	0.08
Emergent Wetland, Wet Meadow	14.5	1.3
Mitigated Wetland	31.5	2.8
Old Field	549.7	48.5
Old Field, Planted Pine	30.5	2.7
Old Field, Wet Meadow	28.1	2.5
Old Field, Hay	115.4	10.2
Planted Pine	12	1.1
Shrub-Carr	66.9	5.9
Swamp Forest	39.6	3.5
Swamp Forest, Shrub Carr	16.8	1.5
Wet Meadow	36.1	3.2
Wet Meadow, Shrub-Carr	39.5	3.5
Wet Meadow, Shrub-Carr, Bog	18.5	1.6
Total	1133.6	

Recreational Use

The OMG SGA provides a host of recreational opportunities for residents and visitors alike. Deer, goose and cottontail rabbit hunting are popular uses of the SGA, and the diversity of bird species, including rare grassland species, generates considerable interest and visitation from the birding community. State game areas in Michigan are under continual pressure for other uses, and those uses will be evaluated on a case-by-case basis for their compliance with state and federal regulations, their compatibility with the establishing purpose of the SGA, and management endeavors that uphold that purpose.

Impacts on the Local Economy

Contributions to the local economy resulting from activities on the game area include wildlife viewing year-round, and waterfowl, deer, grouse and cottontail rabbit hunting. Additionally, sharecropping on up to 100 acres in some years, and occasional timber sales that meet habitat management goals with local logging operators also occur. These activities may provide a direct boost to local restaurants, sporting goods stores, convenience stores and gas stations.

Management Direction

The desired future condition (Table 5) for the OMG SGA is to continue to maintain and improve the grassland area by utilizing disturbance in the form of prescribed fire (and/or mowing), removing the 5-acre aspen island in the middle of the grassland area, allowing hay to convert to old field, and treating invasive species. Likewise, wetland areas will be maintained and improved through invasive species management and protection from damaging activities.

Four focal songbird species have been chosen to monitor impacts of vegetation management. These are Henslow's sparrow, bobolink, eastern meadowlark, and dickcissel (though not a regular breeder at the SGA, they were included due to their listing status and occurrence potential). These grassland songbirds require large tracts of contiguous habitat, and establish breeding territories they defend through singing and vigilance. Because they are relatively stationary and are both visible and audible, they make for ideal indicator species for grassland habitat quality.

Management units within Parcels 1 and 2 of the SGA have been created based on minimum Henslow's sparrow breeding acreages where possible. These management units represent burn (and/or mowing) areas to facilitate maintenance of open grassland conditions. Disturbance (mowing or fire) is essential to maintaining grassland habitat, yet Henslow's sparrows will avoid disturbed sites until approximately 2 years post treatment. Therefore, enacting a rotational management scheme, where each of these units are burned every 4 to 5 years allows units to get treated regularly while ensuring

the sparrows will still have access to adjacent habitat. This facilitates a rotational management scheme outlined in Goal 1, and depicted in Figures 8 and 9.

Table 2. Desired future condition of cover types and habitat issue direction on the OMG SGA.

Cover type and Habitat	Desired Future Condition
Aspen Association	Decrease
Bog	Maintain
Emergent Wetland	Maintain
Mitigated Wetland	Maintain
Native grasses/forbs	Increase
Old Field - Hay	Decrease
Planted Pine	Maintain
Reed canary grass	Decrease
Shrub-Carr	Decrease
Swamp Forest	Maintain
Wet Meadow	Maintain

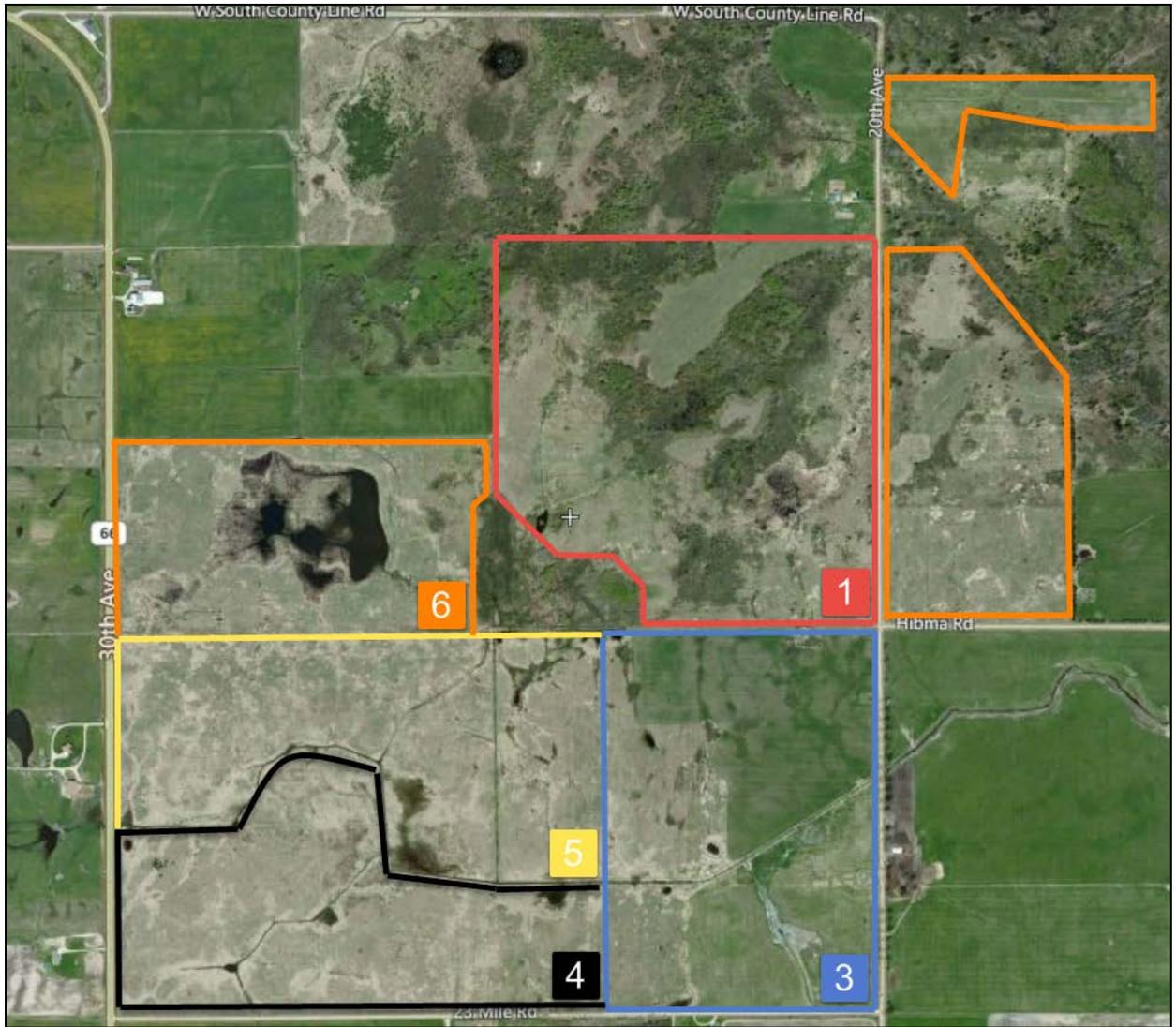


Figure 6. Aerial image showing burn/mowing management units in Parcel 1.



Figure 7. Aerial image showing burn/mowing management units in Parcel 2.

Goals, Objectives, and Management Actions

What follows is the strategic direction for the Osceola-Missaukee Grasslands 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. Goals come primarily from the featured species and habitat issues relevant to OMG SGA.

Goal I. Adaptively manage grassland habitat for sustainable populations of white-tailed deer, wild turkey, and grassland songbirds.

Rationale: White-tailed deer and wild turkey are highly desirable game species, and this SGA provides land locally that serves as nesting, brood-rearing and fawning grounds. Lands surrounding the SGA are dairy or cattle farms, and as such, are planted to corn, soybeans, or hay that is routinely mowed during the summer months. Managing for quality grassland habitat on the SGA benefits numerous other wildlife species including the state endangered Henslow's sparrow.

Metrics: Occupancy and abundance of focal songbird species over time based on point count surveys, forest inventory data and/or MNFI vegetation inventory, and vegetation survey parameters based on the Monfils 2009 protocol (Monfils, M. 2009. CIG-Enhancing incentives for grassland birds. Proposed plan to monitor for the effects of incentives. Michigan Natural Features Inventory. White paper. 3pp).

Objective A. Maintain a minimum of 550 acres of grassland habitat and increase Henslow's sparrow population on the SGA by 10% over the next 10 years. This increase will serve as an indication of increased habitat quality that will benefit other species including white-tailed deer and wild turkey.

Action 1. Continue disturbance regime, preferentially through prescribed fire, such that each management unit in Parcels 1 and 2 are treated every 4 to 5 years. Mowing done via sharecropping will cease or be reduced when the desired future conditions are reached. Sharecropping should include in the contract that an acceptable percentage (generally about 25%) of haylage is left on the ground to accumulate as litter for wildlife benefit.

Action 2. Annually, or as determined, conduct songbird point count surveys according to the Mayhew 2014 protocol (Mayhew, S. 2014. Grassland songbird survey protocol. Michigan Department of Natural Resources. White paper. 3pp) to assess Henslow's sparrow population on the SGA, and grassland songbird utilization.

Action 3. Periodically conduct vegetation survey according to Monfils (2009) to establish baseline condition and vegetation management effectiveness over time.

Action 4. Complete removal of 5-acre aspen island in center of Parcel 1 grassland area. Once the aspen is dead, utilize a firewood sale, or have staff cut and create brushpiles adjacent to forested areas. Monitor and treat any new growth.

Action 5. Develop a treatment plan to convert reed canary grass in grassland areas to either old field grasses and forbs already present, or to a native grass and forb mix suitable for wet soils to begin by no later than 2018.

Action 6. Develop a treatment plan to address other invasive species including spotted knapweed, autumn olive, and phragmites to be implemented by no later than 2020.

Goal II. Adaptively manage wetland areas to improve ecosystem function that will benefit waterfowl use and hunting.

Rationale: Mallards and Canada geese are highly desirable game species and waterfowl hunting is a popular use of the SGA. Managing for waterfowl habitat benefits numerous other wildlife species. Wilson's snipe, trumpeter swans and sora rails have been observed utilizing these cover types of the SGA.

Metrics: Opportunistic staff observation and/or ebird data of waterfowl species presence; wetland vegetation composition over time as assessed by MNFI vegetation and invasive species surveys.

Objective A. On the mitigated wetlands in Parcel 1, work with MDOT to meet their cover type goals as stipulated by DEQ permit, or at a minimum to reduce the reed canary grass cover type by 10% over the next 10 years by converting it to old field or native vegetation.

Action 1. Delineate reed canary grass occurrence area via GPS.

Action 2. Develop and implement a reed canary grass treatment plan in partnership with MDOT by 2018 in concert with the reed canary grass to be treated in the grassland portion of the SGA.

Objective B. Improve ecosystem function in the Dishwash Creek wetland area in Parcel 2 by eliminating the phragmites cover type over the next 10 years.

Action 1. Delineate phragmites occurrence area via GPS.

Action 2. Develop a treatment plan for phragmites and implement by no later than 2020.

Objective C. Maintain ecosystem function in all other wetland types, including bogs.

Action 1. Maintain current extent of emergent wetland, bog, and lowland forest cover types.

Action 2. Implement forest management activities that regenerate lowland forest and shrub stands, ensuring that appropriate Best Management Practices are followed for any treatments adjacent to these wetland types, and that vegetation and distance buffers are implemented so that the local hydrology is not affected.

Action 3. Allow the bog cover-type to follow natural ecosystem processes without disturbance and ensure a buffer is maintained around it for any management in adjacent cover types.

Goal III. Maintain early successional cover types for small game hunting opportunities.

Rationale: Ruffed grouse, American woodcock, and eastern cottontail rabbits are popular game species on the SGA and managing for their habitat benefits numerous other wildlife species, including white-tailed deer.

Metrics: Aspen acres cut per year, staff observation and discussion with hunters; number of brush piles created.

Objective A. Provide suitable young forest habitat for ruffed grouse and American woodcock by harvesting and regenerating aspen and lowland shrub cover types.

Action 1. Where commercial timber harvest is not practicable, establish a rotational timber harvest regime where staff handcut aspen stands annually.

Objective B. Establish brush piles adjacent to forested stands to provide cottontail rabbit hunting opportunities.

Action 1. When possible, utilize dead aspen or uprooted trees from brush control projects from other portions of the SGA to create brush piles along the edges of aspen management areas.

Goal IV. Protect the SGA and expand habitat where opportunities exist.

Rationale: The SGA is subjected to many unauthorized uses which degrade wildlife habitat, including motor vehicle and horse use, in addition to the installation of permanent blinds in wooded areas.

Metrics: Number of boundary signs posted, parking areas maintained, staff observation of unauthorized uses.

Objective A. Establish signage to raise awareness of SGA boundaries and allowable uses.

Action 1. Post boundary, safety zone, and no motor vehicle signs as needed.

Action 2. Install wooden SGA sign by end of 2018.

Action 3. Install information signs at parking areas detailing allowable uses by 2019.

Action 4. Install interpretive grassland ecosystem and grassland species signs at parking areas by 2020.

Objective B. Establish parking areas to facilitate visitation.

Action 1. Beginning in 2017, install 2 parking areas, delineated by landscape boulders, and a 20-foot gate on either end of the former Hibma Road such that further passage into the SGA on the old Hibma Road is no longer possible. These will have room for parking for several vehicles, while allowing large equipment to pass through the gates, if needed.

Action 2. Keep the old Hibma Rd. culverts clear of debris along roadsides as needed.

Action 3. As needed, maintain the east side of the old Hibma Road, via geotextile cloth and gravel in low lying areas, to maintain road access for management by staff as needed.

Objective C. Monitor and resolve trespass issues.

Action 1. Address current trespass issues identified through boundary surveys on any applicable parcels.

Action 2. Through routine boundary sign maintenance, continue to monitor and resolve trespass issues, utilizing the trespass database and working with Wildlife Division Public Lands staff.

Action 3. Work with the County Drain Commissioner to provide parameters under which county drains can be accessed and maintained through State Land Use Permits as needed.

Objective D. Look for opportunities to partner with adjacent landowners to expand wildlife habitat.

Action 1. Seek partnering opportunities with Michigan Nature Association to manage for joint habitat goals.

Action 2. As opportunities arise, educate landowners about Farm Bill programs and how to set aside wildlife habitat on their farms in concert with management on the SGA.

Objective E. Remove the SGA from the State Forest Compartment System and Forest Certification Standards obligation.

Action 1. Articulate justification for removal of the SGA from the state forest system, and follow process for removal.

Acquisition and Disposal of Land

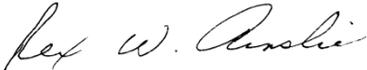
This is a regionally unique game area that provides a host of recreational opportunities for local resident and visitors. Our overall goal is to continue to provide these opportunities. The land acquisition strategy for the OMG SGA is to opportunistically acquire parcels adjacent to the SGA boundary. Parcels will be evaluated as they become available and will be acquired on a willing seller basis only.

Exchanges will be considered for the three satellite parcels, on an as-needed basis.

Plan Review

This plan was available for internal DNR and Tribal review between June 1 and June 15, 2017. A general DNR comment for all master plans suggested taking a more deliberate invasive species approach that focuses on what resource or value is being managed for. This will be addressed in the invasive species treatment plans. One Tribal comment was received, and it was supportive of the management actions listed herein. This plan was also available for public review and comment between July 17, 2017 and September 7, 2017. No comments were received. This plan will be reviewed within 10 years of the approved date.

Approvals

	September 26, 2017
Dale Rabe, Field Operations Manager	Date
	October 24, 2017
Rex Ainslie, Regional Supervisor	Date

Appendix A. OMG SGA bird list.

Common Name	Scientific Name
Canada goose	<i>Branta canadensis</i>
Trumpeter swan	<i>Cygnus buccinator</i>
Mallard	<i>Anas platyrhynchos</i>
Blue-winged teal	<i>Anas discors</i>
Chinese ring-necked pheasant	<i>Phasianus colchicus</i>
Ruffed grouse	<i>Bonasa umbellus</i>
Wild turkey	<i>Melleagris gallopavo</i>
Northern harrier	<i>Circus cyaneus</i>
Sora	<i>Porzana carolina</i>
Sandhill crane	<i>Grus canadensis</i>
Killdeer	<i>Charadrius vociferus</i>
Upland sandpiper	<i>Bartramia longicauda</i>
Wilson's snipe	<i>Gallinago delicata</i>
Mourning dove	<i>Zenaida macroura</i>
Northern flicker	<i>Colaptes auratus</i>
Eastern wood-pewee	<i>Contopus virens</i>
Willow flycatcher	<i>Empidonax traillii</i>
Great crested flycatcher	<i>Myiarchus tyrannulus</i>
Eastern kingbird	<i>Tyrannus tyrannus</i>
Red-eyed vireo	<i>Vireo olivaceus</i>
Blue jay	<i>Cyanocitta cristata</i>
American crow	<i>Corvus brachyrhynchos</i>

Common Name	Scientific Name
Tree swallow	<i>Tachycineta bicolor</i>
Sedge wren	<i>Cistothorus platensis</i>
Veery	<i>Catharus fuscenscens</i>
American robin	<i>Turdus migratorius</i>
Gray catbird	<i>Dumetella carolinensis</i>
Brown thrasher	<i>Toxostoma rufum</i>
Cedar waxwing	<i>Bombycilla cedrorum</i>
Common yellowthroat	<i>Geothlypis trichas</i>
Yellow warbler	<i>Setophaga petechia</i>
Chestnut-sided warbler	<i>Setophaga pensylvanica</i>
Clay-colored sparrow	<i>Spizella pallida</i>
Field sparrow	<i>Spizella pusilla</i>
Savannah sparrow	<i>Passerculus sandwichensis</i>
Henslow's sparrow	<i>Ammodramus henslowii</i>
Song sparrow	<i>Melospiza melodia</i>
Swamp sparrow	<i>Melospiza georgiana</i>
Dickcissel	<i>Spiza americana</i>
Bobolink	<i>Dolichonyx oryzivorus</i>
Red-winged blackbird	<i>Agelaius phoeniceus</i>
Eastern meadowlark	<i>Sturnella magna</i>
Common grackle	<i>Quiscalus quiscula</i>
Purple finch	<i>Haemorhous purpureus</i>
American goldfinch	<i>Spinus tristis</i>