

Vassar State Game Area Master Plan  
Michigan Department of Natural Resources



**MICHIGAN DEPARTMENT OF NATURAL RESOURCES**  
**WILDLIFE DIVISION**  
**DON BONNETTE**  
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## **Intended Purpose and General Management Direction**

The Vassar SGA is in the west-central part of Tuscola County in the “thumb” of Michigan, two miles northeast of Vassar and seven miles southwest of Caro. The primary management objective for the Vassar SGA is to maintain upland habitat for optimum numbers of white-tailed deer, ruffed grouse, woodcock and wild turkey. Thus, the main management objective is to keep most of the game area in the early stages of forest succession to provide habitat for these featured species. Though early successional forest management will be the primary habitat objective there is some opportunity to manage for late successional forest habitat along the Cass River and manage for species (wild turkey in particular) associated with those cover types.

Except for 23 acres acquired through tax reversion, the land on the game area was purchased with federal Pittman-Robertson or Fish and Game funds beginning in the late 1940's, and was complete by the early 1970's bringing the total to 3,405 acres. See Appendix 1 for current maps and area rules.

In the future (50-100 years from now) we want the area to continue to contribute to sustainable populations of important wildlife species, provide valuable hunting recreation, and serve as a stronghold for those identified featured species.

## **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), the Division's Southeast Regional Operational Plan, Southeast Region Habitat Guidance documents, and the Southeast Region Land Management Plan are all reflected in this master plan.

## **Wildlife Species**

True to the intended purpose of the game area 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.

**Table 1.** Featured species to be worked on during this planning period, reflecting opportunities for habitat or recreational management.

<b>Common Name</b>	<b>Featured Species</b>	<b>T&amp;E, SC Species</b>	<b>Climate Change Vulnerable</b>	<b>Habitat Needs</b>
Ruffed Grouse	<b>Yes</b>	<b>No</b>	<b>Yes</b>	<b>Young forests, aspen</b>
White-tailed deer	<b>Yes</b>	<b>No</b>	<b>No</b>	<b>Openings, mast trees Young forests</b>
Wild Turkey	<b>Yes</b>	<b>No</b>	<b>No</b>	<b>Openings, mast trees</b>
Woodcock	<b>Yes</b>	<b>No</b>	<b>No</b>	<b>Young forests, aspen, openings</b>

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.

We will monitor for invasive species while conducting management and/or inventory activities on the area and address them as they are discovered. Invasive species of greatest concern include phragmites, glossy buckthorn, Japanese barberry, dames rocket, garlic mustard and black locust.

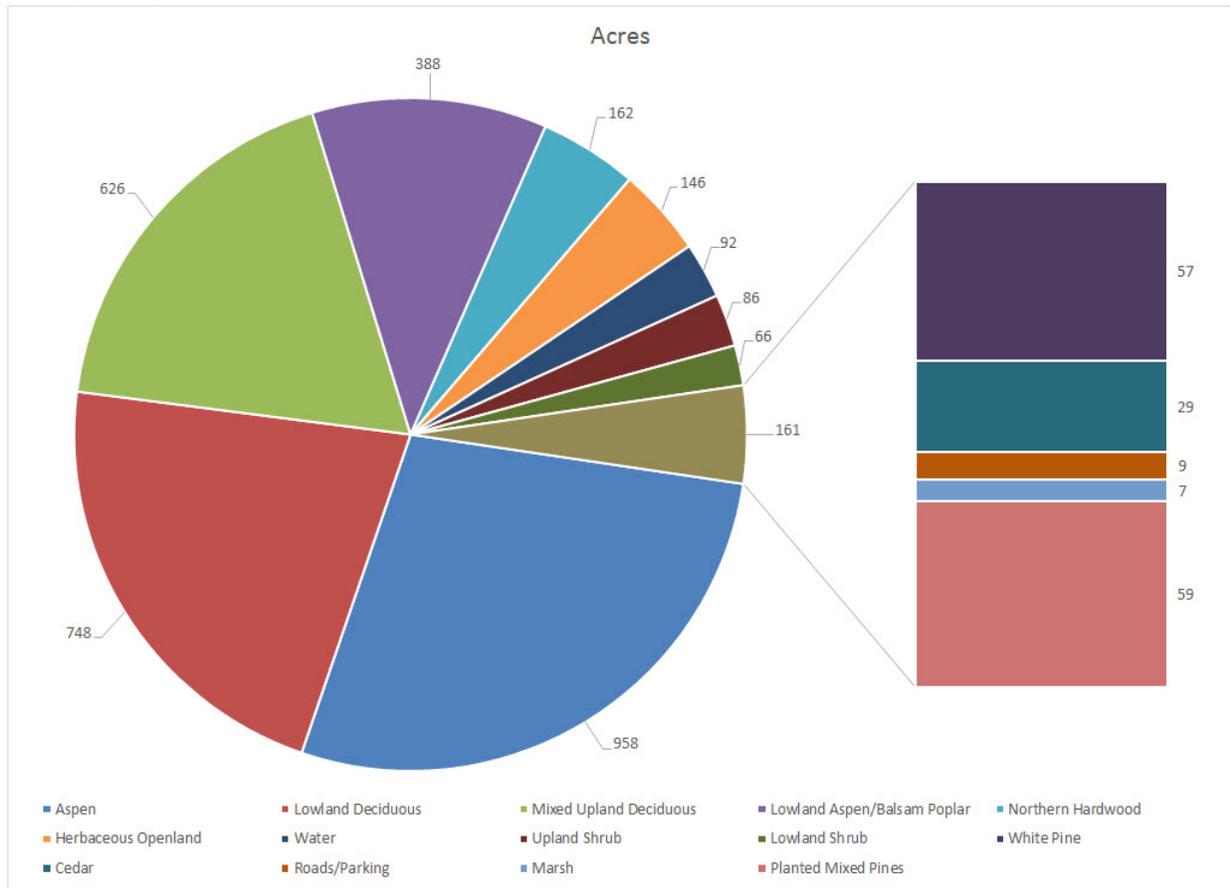
Recent Michigan Forest Inventory surveys indicated the presence of American beak grain (*Diarrhena obovata*; state special concern), American stoneseed (*Lithospermum latifolium*; state special concern) and Louisiana water thrush (state threatened). Though active management for those species is likely not necessary, each will be considered when conducting management activities where they may occur.

## **Existing Conditions**

The area is level to slightly rolling with 0-6% slopes, though steeper slopes are found along the banks of the Cass River which enters the game area on the east side and meanders in a southwest direction for the entire length. Soils on the game area are somewhat poorly drained, poorly drained and somewhat excessively drained sand soils typically found on glacial outwash plains, moraines, lake plains and beaches. Two small lakes formed by sand and gravel mining are in section 25 and 27. A sand mining lease in section 27 is currently active.

Forest inventory data collected for the Michigan Forest Inventory database shows that 88% of the total acreage is forested and 12% is in non-forest cover types. Figure 1 provides a cover type analysis by acreage for all cover types on the game area.

Appendix 1 provides maps showing the location of each cover type by compartment. Slightly less than 40% of the forested portion of the game area is in aspen cover types (upland aspen and lowland aspen combined); 22% is in lowland deciduous types and 18% is in mixed upland deciduous types. The remainder of the forested acreage consists of small patches of northern hardwoods, naturally occurring white pine, cedar and planted mixed pine. The bulk of non-forest cover types consist of herbaceous open lands, upland shrub and lowland shrub which are essentially remnant agricultural fields slowly filling in with brush and small trees.



**Figure 1:** Vassar SGA cover type analysis by acreage based on 2014 Michigan Forest Inventory field data. Relatively high quality mature upland and lowland forest cover types are present in compartments 3, 4 and 6 along the banks of the Cass River. It was in these stands that those species of state special concern (American stone seed, American beak grain) and state threatened (Louisiana water thrush) were identified. Outside this relatively narrow corridor along the Cass River forested and non-forest cover types have been sufficiently degraded through various anthropogenic land management practices that rare species are not likely to be found.

## **Recreational Use**

The Vassar SGA provides a host of recreational opportunities for local residents and visitors alike, including hunting, trapping, bird watching, wildlife viewing and canoeing. 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 have included timber management activities through contracts with local loggers, plus many hunter use days each year that provide a direct boost to local restaurants, sporting goods stores and convenience stores and gas stations.

## **Management Direction**

The desired future condition for the Vassar SGA is outlined in table 2.

**Table 2.** Desired future condition of cover types on the Vassar SGA

<b><i>Cover type and Habitat Issues</i></b>	<b><i>Desired Future Condition</i></b>
Aspen	Maintain, Increase where possible
Lowland Deciduous	Maintain or Decrease in stands where aspen is present
Mixed Upland Deciduous	Decrease – convert to aspen where possible
Lowland Aspen/Balsam	Increase
Northern Hardwoods	Maintain
Herbaceous Open land	Maintain, Increase where possible
Upland Shrub	Maintain
Lowland Shrub	Maintain
Natural White Pine	Maintain
Cedar	Maintain
Planted Mixed Pine	Decrease
Oak	Increase
Mature Forest Cover along Cass R.	Maintain

## Goals, Objectives, and Management Actions

What follows is the strategic direction for the Vassar SGA, to be implemented during this planning cycle. This plan describes the **goals** or desired future condition for the area and comes mostly from the featured species and habitat issues relevant to the Vassar SGA. **Objectives** are quantifiable approaches or strategies used to move toward accomplishing the goals. Under each objective is an **action** which is a step needed to complete an objective and contains sufficient detail to inform implementation in operational work plans.

**Goal I:** Sustainable populations of ruffed grouse and American woodcock

**Rationale:** Grouse and woodcock are highly desirable game species and managing for their habitat benefits numerous other wildlife species. White-tailed deer and wild turkey also benefit from Actions taken under this Goal.

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

**Objective A:** Maintain current acreage of aspen cover types and seek opportunities to increase the total acreage on the area by 10% to 1,700 acres and provide a balance of age classes on a 40-year rotation (25% at age 0-10, 25% at age 11-20, 25% at age 21-30, 25% at age 31-40) in a manner that optimizes the spatial arrangement for the benefit of grouse and woodcock

**Action 1:** Establish an aspen harvest regime (~700 acres every decade) that will expand and improve the aspen type and optimize the age class distribution and juxtaposition of aspen stands

**Action 2:** Identify individual mixed upland, lowland deciduous and mixed planted pine stands for potential conversion to aspen

**Objective B:** Provide suitable forest openings (1-10 acres in size), comprising 10 % of the area for breeding and roosting habitat for woodcock within aspen complexes

**Action1:** Maintain existing openings and create small herbaceous openings at log landing/processing areas within aspen complexes

**Goal II:** Sustainable populations of wild turkey on the Vassar SGA

**Rationale:** Wild turkeys are highly desirable game species and managing for their habitat, especially the oak component of the forest, benefits numerous other wildlife species. White-tailed deer also benefit from Actions taken under this Goal.

**Metrics:** staff observation and hunter surveys; assessment of oak component within Michigan Forest Inventory, number of suitable forest openings

**Objective A:** Maintain or increase the oak component in non-oak stands. Oak is currently a relatively minor component of the forest community on the area, therefore it is important to maintain and expand oak wherever it is present

**Action 1.** When managing other forested cover types, including mixed upland deciduous, lowland deciduous and planted mixed pine, identify opportunities for maintaining or increasing the oak component

**Goal III:** Maintain mature mixed upland deciduous and lowland deciduous forest components along the Cass River in compartments 3, 4 and 6.

**Rationale:** Mature forest types such as these are rare in this part of the state and are home to state special concern and state threatened species. This cover type also benefits wild turkey and wood ducks.

**Metrics:** staff observation; assessment of mature forest component within the Michigan Forest Inventory.

**Objective A:** Maintain mature forest component

**Action 1:** Limit disturbance to forest cover within individual stands

**Action 2.** Monitor stands for invasive species and promptly deal with those that are found

## **Acquisition and Disposal of Land**

The Vassar SGA provides a host of recreational opportunities for local resident and visitors and our overall goal is to continue to provide these opportunities. The land acquisition strategy for the area 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.

## **Review and Approval**

This plan will be available for public review and comment on the DNR website between March 13, 2017 and April 10, 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 Don Bonnette [bonnetted@michigan.gov](mailto:bonnetted@michigan.gov)

## ***Approvals***

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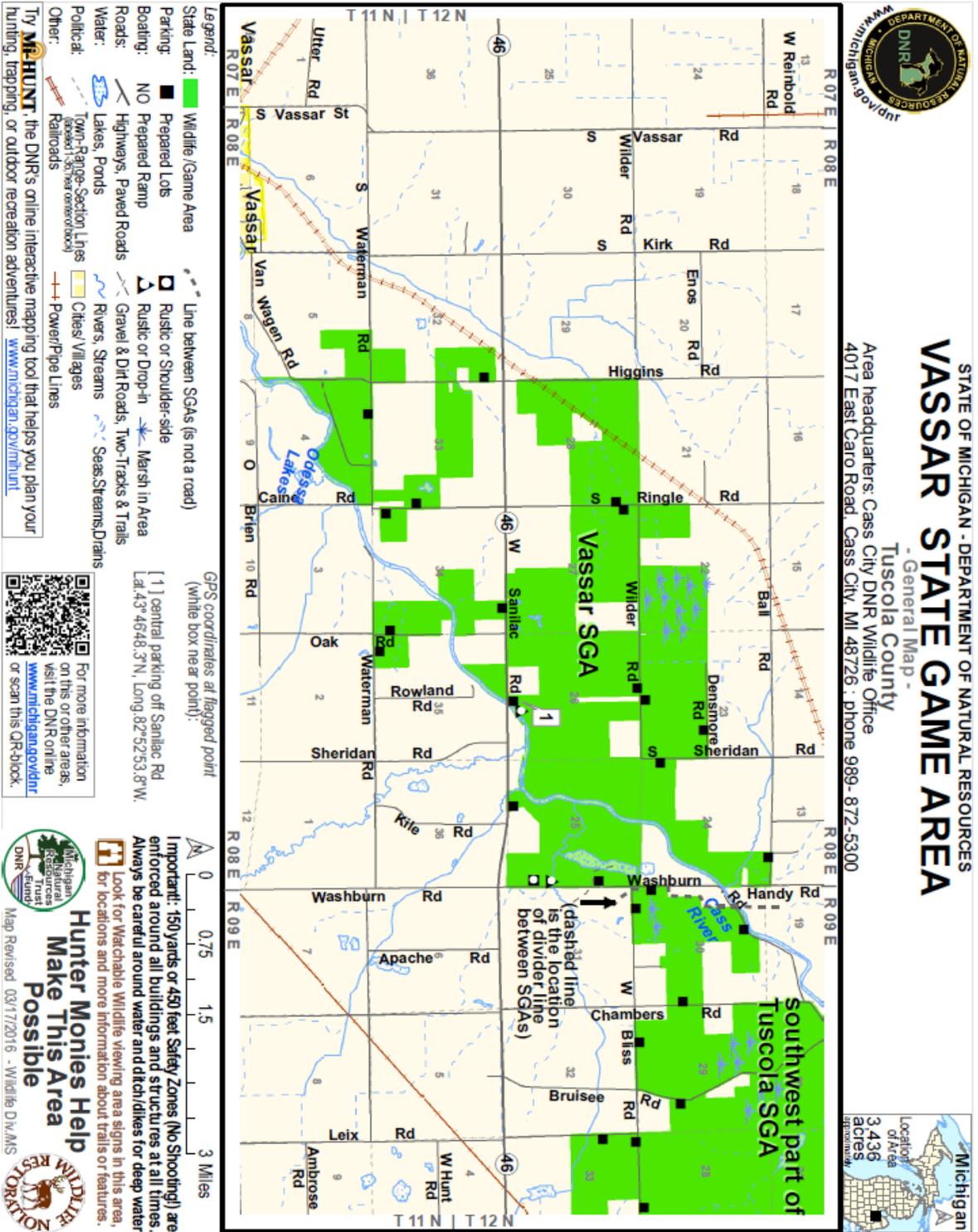
Nathan Levitte, Field Operations Manager

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Timothy Payne, Southeast Region Supervisor

# Appendix 1

## Current Vassar SGA map





# Compartment Maps for compartments 5 and 6

