

Backus Creek State Game Area Master Plan



MICHIGAN DEPARTMENT OF NATURAL RESOURCES

**WILDLIFE DIVISION
MARK R. BOERSEN
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Intended Purpose and General Management Direction

The Backus Creek State Game Area (SGA) was dedicated on October 13, 1954. What was then known as the Game Division had investigated the possibility of constructing two dams east of Houghton Lake to enhance and create wetland habitat. Before establishment as a Game Area, a portion of the lands within the proposed boundaries were in a single private ownership organized as a hunting club. Just prior to dedication, a purchase option was established for the privately-owned lands within the project boundaries. With the formal dedication, approval was obtained to purchase those lands and develop the SGA as a Pittman-Robertson project.

Pittman-Robertson funds are a source of federal aid generated from taxes on sporting arms and ammunition and are apportioned to states for 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 Conservation Commission memo stated the main management goals for the area were waterfowl and furbearing animal production and that hunting pressure within the area was relatively heavy. The SGA is located within the Northern Lower Peninsula (NLP) of Michigan (Figure 1). The area was originally centered at town 23N, range 2W and included all or part of sections 19, 28, 29, 30, 31, 32, 33. In 2008, an addition to the SGA was made that incorporated the Backus Lake Flooding. This addition consists of town 22N, range 2W, and portions of sections 4, 5, 8, and 9. The SGA now totals approximately 4,378 acres.

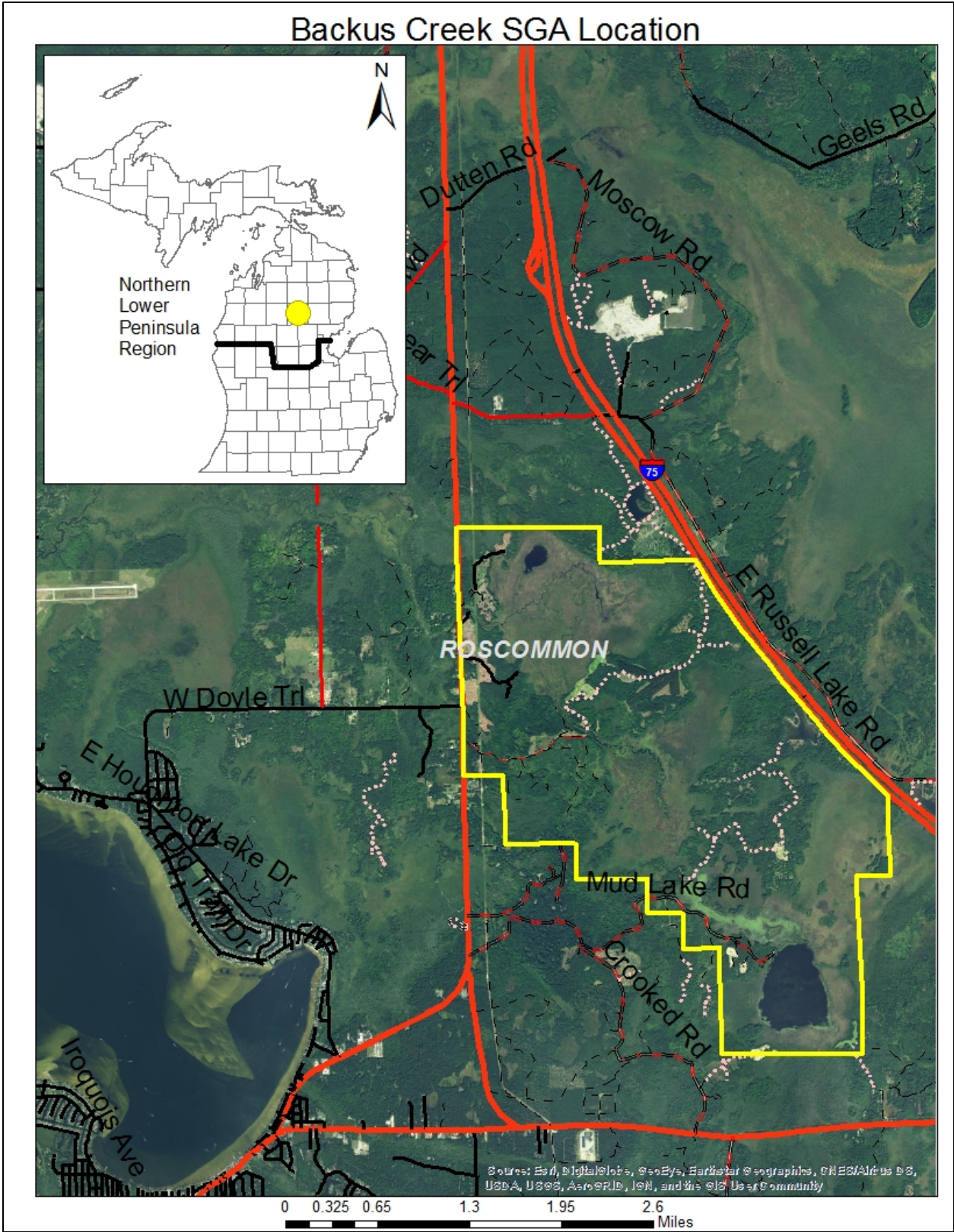


Figure 1. Location of the Backus Creek SGA, Roscommon County, Michigan.

The principal goal for the Backus Creek SGA is to intensively manage a diversity of wildlife habitats that will create high quality hunting opportunities for hunters with a wide range of experience levels. Consistent with the original area goals, present management efforts continue to focus on wetland management within the three floodings for waterfowl and furbearer production and associated hunting and trapping recreational opportunities. Additionally, a renewed management effort has developed focusing on the upland areas of the SGA for gamebird habitat improvement, including public hunter walking trails as part of Michigan's Grouse Enhanced Management Sites (GEMS) program and enhancing big game hunting opportunities. This plan is intended to help target management activities and resources to achieve those area goals. Management actions at the SGA support the goals of the Wildlife Division to enhance hunting opportunities and increase participation in the sport of hunting and trapping. The long-term management goal is to develop the SGA into a premier public hunting area in Michigan's Northern Lower Peninsula.

Background

Roscommon County has a long history as a popular destination for those seeking outdoor recreational opportunities, in large part due to its centralized location and vast amount of publicly owned lands. Early resource managers recognized the potential for waterfowl management on the lowlands along Backus Creek, east of Houghton Lake. The forested lowlands of this area were conducive to management for wood ducks at a time when the wood duck population was still recovering from near extinction in the early 1900's. Today the Backus Creek SGA still provides important habitat for wood ducks and other waterfowl, as well as other present day rare species such as osprey, loons, trumpeter swans and black terns. Management activities focus on maintaining favorable conditions for both game and non-game native species as well as combating factors that threaten desirable wildlife such as invasive species and incompatible intrusive uses.

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 wildlife-based recreation), More Bang For Your Buck concepts (outstanding grouse, woodcock and turkey hunting, big game, challenge of small game hunting, and great diversity of high quality waterfowl hunting), the Division's NLP Regional Operational Plan, and the GEMS program goals (promoting hunter recruitment and retention, expanding local economies, providing a destination point for the traveling wing-shooter and acceleration of timber harvest opportunities) 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 MDNR'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.

Wildlife Species

Present day management efforts are consistent with original goals established by the Conservation Commission. Additionally, the extensive upland and lowland areas of the SGA are managed to promote quality game bird and deer hunting. Habitat needs for several game and non-game species (Table 1) are considered when deciding management direction for the Backus Creek SGA. Access for fishing is also considered, although not a primary goal for the area.

Table 1. A list of species 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
Beaver	Yes	No	No	Maintain hydrology
Osprey	Yes	Yes	No	Maintain nesting platforms
Ruffed grouse	Yes	No	No	Short rotation aspen management
Trumpeter Swan	No	Yes	Yes	Maintain emergent vegetation
White-tailed deer	Yes	No	No	Grassy openings and mast trees
Wild Turkey	Yes	No	No	Grassy openings and mast trees
Woodcock	Yes	No	No	Short rotation aspen management, openings

Common Name	Featured Species	T&E, Special Concern Species	Climate Change Vulnerable	Remarks
Wood Duck	Yes	No	No	Provide suitable nesting cavities

Trumpeter swan is presumed to be moderately vulnerable based on climate change vulnerability assessments, and the species range may shift resulting in it being locally absent. Similarly, osprey and ruffed grouse are presumed stable in a climate change scenario at the population level; however, these species may respond to climate change by shifting their ranges which may result in them being locally absent.

White-tailed deer are presumed stable under climate change in terms of overall abundance and distribution in Michigan; however, in the NLP, hotter and drier summers may increase the occurrence of Epizootic Hemorrhagic Disease farther north resulting in temporary local population declines.

Existing Conditions

Three wetland impoundments are located within the boundaries of the Backus Creek SGA. All three have water control structures and are regulated by DEQ under part 315 of The Natural Resources and Environmental Protection Act (Public Act 451, 1994). The upper two impoundments have a low hazard rating, and are inspected every 5 years, and the Little Mud Lake structure has a high hazard rating due to the proximity of homes downstream and is inspected every three years. Most of the SGA consists of wetlands ranging from open water to emergent wetland with scrub-shrub margins and bottomland forests.

The uppermost impoundment is the Backus Lake Flooding (Figure 2). This impoundment has the most open water acreage. The flooding is approximately 735 acres and is impounded by an earthen dam with a water control structure and auxiliary concrete spillway. This impoundment is the headwaters of Backus Creek and is fed by natural runoff from the surrounding lowlands and wetlands.

The second impoundment is the Backus Creek Flooding which is fed by the outflow from the Backus Lake dam. This flooding is about 485 acres and is predominately characterized by scrub-shrub and emergent wetlands. A four-bay concrete stoplog structure facilitates water level control.

The third impoundment is the Little Mud Lake Flooding which receives water from the outflow of the Backus Creek Dam. This flooding is nearly 610 acres and mainly consists of scrub-shrub and emergent wetlands. A four-bay concrete stoplog structure enables water level control with the outflow forming Backus Creek, which eventually empties into Houghton Lake.

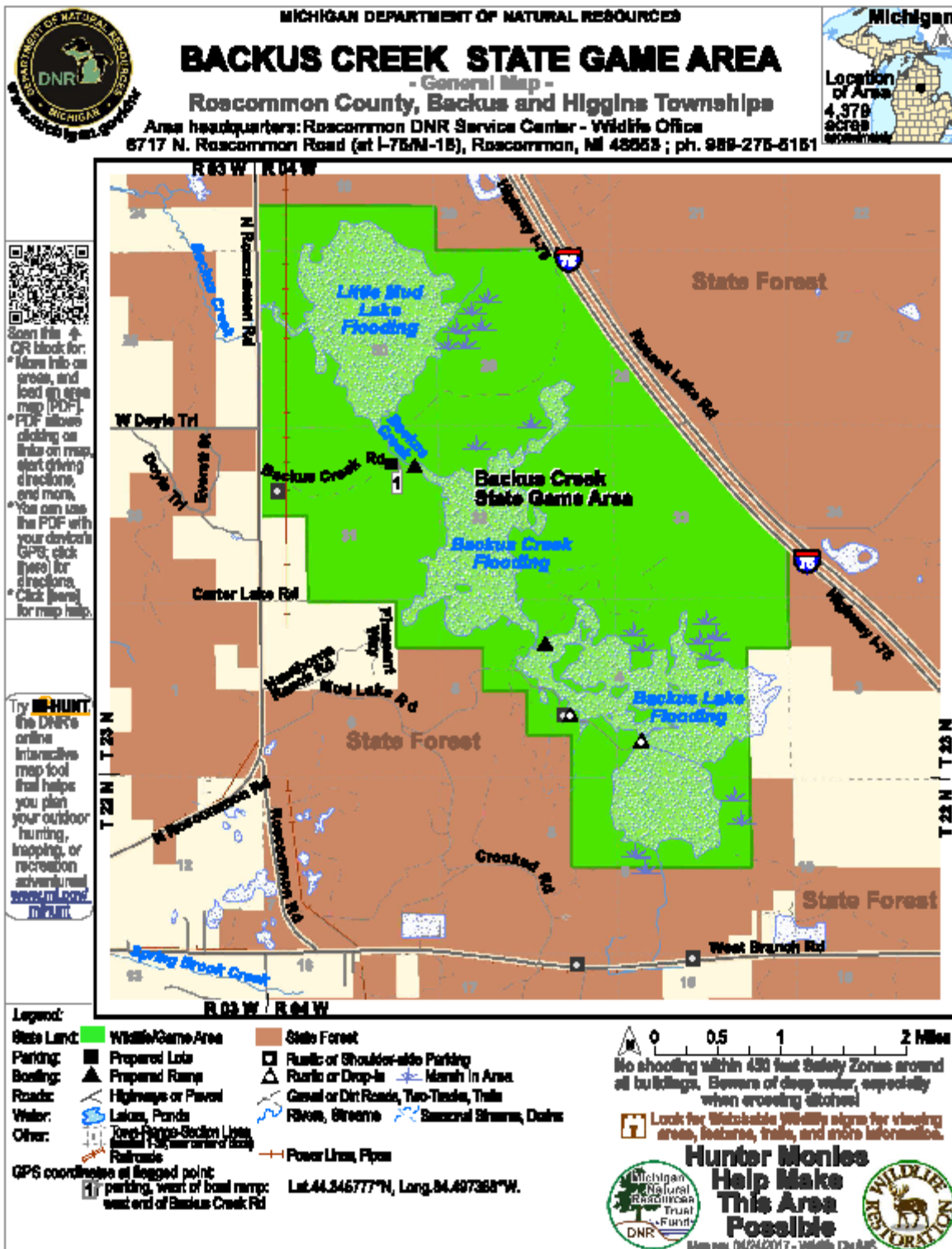


Figure 2. Official Backus Creek SGA map and surrounding state forest land.

Current upland cover types adjacent to the impoundments include aspen associations, oak associations, lowland coniferous forest, and pine (Table 2 and Figure 3). Numerous openings are found throughout the upland portions of the game area and are maintained by the Wildlife Division using a variety of food and cover crops to benefit wildlife species. Most land adjacent to the SGA is State Forest, also managed by the DNR. There is an adjoining hunting club along a portion of the southeast SGA boundary. Along parts of the western boundary are smaller private ownerships with residences. Much of the east SGA boundary adjoins Interstate 75 (I-75).

Table 2. Current cover types on the Backus Creek SGA based on MiFi surveys from 2017.

Cover type	Acres	Percent of Game Area
Northern hardwoods	9	0.2
Oak	3	0.1
Aspen	1023	23.4
Mixed Upland Deciduous	43	1.0
Planted Pines	60	1.4
Natural Pines	94	2.1
Other Upland Conifers	102	2.3
Upland Mixed Forest	102	2.3
Lowland Deciduous Forest	131	3.0
Lowland Coniferous Forest	292	6.7
Lowland Mixed Forest	26	0.6
Herbaceous Openland	210	4.8
Upland Scrub	14	0.3
Low Density Trees	48	1.1
Water	939	21.5
Lowland Shrub	941	21.5
Emergent Wetland	268	6.1

Cover type	Acres	Percent of Game Area
Mixed Non-Forested Wetland	71	1.6
Roads/Parking Lot	0	0
Total	4,378	100.0

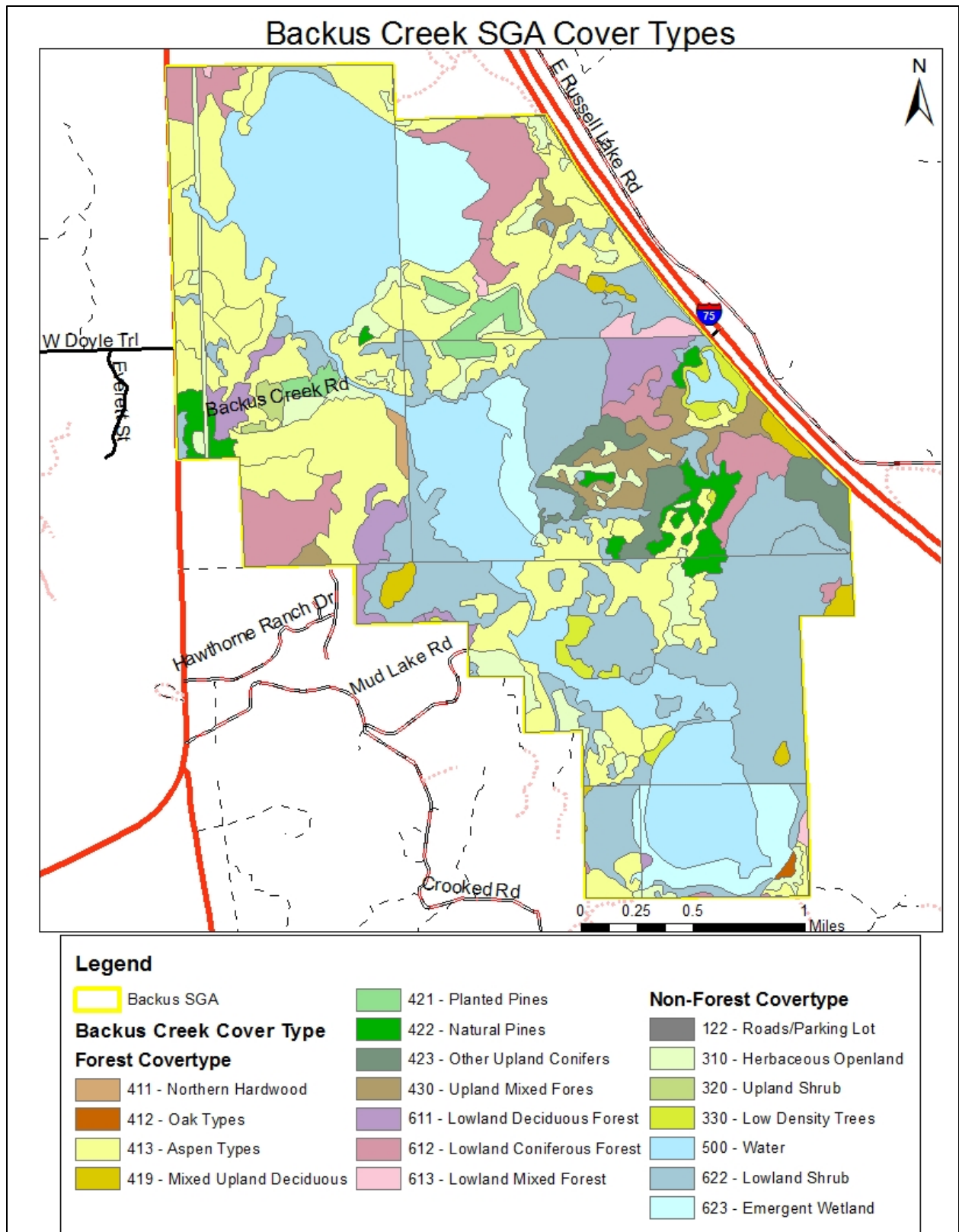


Figure 2. Cover types for the Backus Creek SGA.

Land Type Associations (LTAs) are ecosystem classifications based on local glacial geomorphology, soil texture and drainage class, and overstory vegetation type. Two LTAs are associated with the Backus Creek SGA. Most of the SGA (except for the Little Mud Lake impoundment) consists of broad, flat outwash plain with poorly drained sand or loamy sand. The Little Mud Lake Unit is characterized by broad, flat outwash plain with very poorly drained peat and muck soil types.

Three utility easements exist along the western 1.75-mile edge of the SGA. Those include two power-line easements and one gas-line easement. Activities associated with the easements typically include clearing of the easement rights-of-way to keep them relatively clear of trees and brush.

Numerous invasive species have been documented at the SGA and have the potential to threaten native plants, animals, and the ecosystems they depend on. Within the wetlands, purple loosestrife and phragmites are present. Phragmites occurrences are most common along the east SGA border adjoining I-75. Spotted knapweed can be found in most open areas mixed with native grasses or planted cover crops. Autumn olive occurs in open and semi-open areas that are not regularly tilled as a part of the openings management program. Several epicenters of oak wilt have been observed within the hardwoods near the southwest boundary, adjacent to some private residences. Feral swine were most problematic from around 2006-2011 with frequent rooting documented in managed wildlife openings and forests.

Recreational Use

Hunting is the primary recreation at Backus Creek SGA. Hunters regularly pursue deer, turkey, bear, various species of waterfowl, grouse, woodcock, snowshoe hare and squirrel. Trapping is also popular within the wetland areas for beaver, muskrat, mink, and river otter. Adjacent to the floodings and in the upland areas trappers also pursue coyote, fox, and raccoon. Fishing is quite popular at the uppermost Backus Lake flooding, primarily in the spring and summer months. Anglers are frequently observed at the Backus Creek and Little Mud dams as well. Rustic boat launches found just above the Backus Creek Dam and at the road end at Backus Lake are commonly used by duck hunters and anglers. Camping throughout the SGA, and especially at the Backus Lake Flooding, is popular during the summer and fall months. Currently there are no designated camping locations within the SGA that allows this activity from May 15 to September 10. Hiking and birdwatching are secondary uses of the game area and occur year-round.

Impacts on the Local Economy

The local economy benefits from management activity on the SGA through regular timber harvests used to benefit game species. Recreation in the form of hunting, trapping, fishing, birdwatching, hiking and canoeing are significant, but have not been quantified. Past waterfowl bag check surveys found many duck hunters travel to this SGA from southern Michigan, especially to take advantage of staggered regional

opening season dates. The popularity of deer hunting and grouse hunting on the SGA likely benefits local businesses, especially those in the food service and lodging industries. The managed openings program will occasionally utilize contractors to prepare and plant fields for wildlife cover and habitat creation.

Management Direction

All management actions at the Backus Creek SGA are implemented with the primary goal of enhancing hunting and trapping opportunities while maintaining favorable habitat conditions for threatened and endangered species (Table 3). In 2017, the Backus GEMS was established with most of the walking trails within the boundaries of the SGA. GEMS provide maintained hunter walking trails which assist those who are new to the sport of upland game bird hunting or those with mobility challenges. Accordingly, much of the upland habitat at the SGA is managed with the GEMS program goals in mind.

Table 3. Desired future conditions for Backus Creek SGA.

Cover Type	Desired Future Condition	Action Needed
Lowland forest	Maintain	Monitor for invasive species
Upland forest	Maintain	Maintain mast producing trees, continue rotation of early successional forests
Pine plantation	Decrease	Harvest and regenerate to early successional species or grasslands and wildlife openings
Lowland brush	Maintain	Monitor for invasive species
Marsh	Maintain	Monitor for invasives, especially Phragmites and develop plan to address
Grassland/Opening	Increase	Convert plantations and use fire to expand openings where possible
Open water	Maintain	Monitor for invasive species

Goals, Objectives, and Management Actions

Goal I. Provide quality waterfowl hunting and furbearer harvest opportunities on floodings at the Backus SGA.

Rationale. Waterfowl hunting and trapping opportunities are limited in the north-central portion of Michigan's Lower Peninsula. Waterfowl hunting is an important recreational activity to many Michigan residents and out-of-state visitors. Hunting related recreation improves local economies.

Metrics. Number of drawdowns per flooding, number of invasive species treatments, Number of MiFI treatments incorporating snag retention or small diameter tree retention adjacent to floodings.

Objective A. Improve and maintain wetland habitat for waterfowl and furbearing mammals.

Action 1. Conduct drawdowns on a rotating basis across floodings such that each flooding is drawn down approximately once every 4 years, and typically only one is in drawdown at any given time; mimic natural and local hydrologic cycles to the extent possible.

Action 2. Draw water down slowly during any kind of drawdown to promote vegetation diversity, prolong foraging opportunities, to allow new areas to become available for foraging, and to reduce siltation.

Action 3. Utilize drawdowns to encourage regeneration of the native seed bed preferentially over supplemental seeding.

Action 4. Work with Forest Resources Division (FRD) to incorporate retention of standing snags along flooding shorelines and to leave long lived hardwood trees for future snags for wood ducks.

Action 5. Monitor for undesired plant species in wetlands, and treat accordingly using herbicides, mowing, or fire as warranted depending on the specified management direction.

Action 6. Work with FRD, through the compartment review process, to promote aspen and maple stands adjacent to water in the 1 to 6-inch DBH size class to benefit beaver.

Objective B. Provide adequate hunter access to waterfowl areas.

Action 1. Rip rap informal boat launches in Backus Creek SGA so that hunters can access the water without further contributing to bank erosion or water sedimentation.

Action 2. Maintain parking areas for waterfowl hunters while restricting camping where not administratively allowed.

Goal II. Provide habitat for non-game species where possible throughout the SGA.

Rationale. Non-game species are a vital component within healthy ecosystems and are part of the natural diversity of Michigan. Non-game viewing opportunities are important to a wide variety of user groups.

Metrics. Number of nest boxes erected, staff species observations, Michigan Natural Features Inventory Element Occurrences.

Objective A. Maintain suitable habitat for non-game species on floodings.

Action 1. When possible, time drawdowns so that mudflats are exposed to shorebirds during migration times.

Action 2. Identify suitable sites for erection of nesting boxes; work with partners to make, erect and manage nesting boxes annually.

Action 3. Maintain osprey platforms as needed.

Goal III. Promote ecological health and biological integrity of wetland habitats.

Rationale. Wetlands are important for water quality, flood storage capacity, erosion control, wildlife habitat, and public recreation.

Metrics. Number of invasive species treatments.

Objective A. Reduce invasive species occurrence and minimize water quality impacts.

Action 1. Treat invasive species, including purple loosestrife, phragmites, and glossy buckthorn as needed according to the DNR Invasive Species Strategy.

Action 2. Opportunistically monitor for mute swans and control numbers when needed.

Action 3. Minimize use of herbicides or pesticides where possible to minimize impacts to sensitive species and water quality.

Goal IV. Provide quality deer and upland game bird hunting opportunities.

Rationale. Deer, turkey, grouse and woodcock are highly desirable game species and managing for their habitat benefits many other wildlife species.

Metrics. Miles of gamebird trails maintained annually, number of closed roads, acres of openings maintained annually, number of treatments in MiFI that promote shorter aspen rotations.

Objective A. Improve hunt quality at Backus Creek SGA.

Action 1. Restrict motor vehicle access on all roads that are not maintained by the county.

Action 2. Manage upland game bird walking trails and hunter access following the GEMS plan.

Action 3. Request a Director's Order that will formalize the road closure to minimize disturbance for hunters and ensure protection of quality deer and turkey habitat and protection of grouse walking trails.

Action 4. To reduce fragmentation of current openings and to restore the former opening located between the Backus Creek and Little Mud Lake floodings, remove the red pine plantation; this will improve habitat for deer, turkey, upland grassland birds and nesting Canada geese and mallards.

Objective B. Manage and maintain wildlife openings associated with these areas to provide deer and turkey forage and hunting opportunities.

Action 1. Follow the unit annual openings maintenance plan which includes burning, mowing, and planting on the wildlife openings throughout the SGA.

Action 2. Explore alternative wildlife crops for openings near floodings associated with these areas such as corn, oats, or sunflowers that will benefit deer, turkey, and other game species.

Action 3. Treat or remove invasive species such as black locust, autumn olive and spotted knapweed within and adjacent to openings.

Objective C. Manage forest habitat to benefit deer and grouse on these areas.

Action 1. Manage aspen stands on 30 to 40-year rotations through the compartment review process.

Action 2. Emphasize early successional habitat along GEMS trails.

Action 3. Manage oak trees, especially white oak, to provide sources of hard mast.

Action 4. Manage lowland conifer stands to provide winter thermal cover for deer.

Goal V. Address infrastructure and maintenance needs.

Rationale. Infrastructure such as dams help maintain wetland areas and gates limit resource damage.

Metrics. Number of annual dike treatments, DEQ dam inspection reports.

Objective A. Maintain the water control infrastructure on each flooding in a safe and operable condition.

Action 1. Mow or herbicide dikes annually to keep free of woody vegetation.

Action 2. Keep water control structures free of debris and obstructions.

Action 3. Establish barriers extending outward from all gates as needed to prevent ORV traffic from accessing dams, dikes and other areas where vehicles are not permitted.

Action 4. Replace damaged or missing stop logs on dams as needed.

Action 5. Request funding to conduct an engineering assessment of the present condition and future needs for each dam structure.

Objective B. Review and update current public use protocols as necessary to address use impacts.

Action 1. Review the dispersed camping that occurs throughout Backus Creek SGA and determine how to address associated issues.

Action 2. Work with Fisheries Division to request a Director's Order to formalize the road closure on the north maintenance road to protect the Backus Creek SGA and the walleye rearing pond.

Acquisition and Disposal of Land

This is an important game area that provides a host of recreational opportunities for local resident and visitors. With the Backus Creek SGA located close to two major travel corridors (I-75 and US 127), substantial numbers of visitors utilize this area along with the surrounding state forest. Our overall goal is to continue to provide and improve recreational opportunities. The land acquisition strategy for the Backus Creek SGA is to acquire available lands located adjacent to existing boundaries that are, or could be, impacted by water level management. The southeast edge of the SGA is bordered by a 480-acre hunting club. The area of interest is in town 22N, range 2W, section 4 (SE1/4 of NE1/2, and the E1/2 of SE1/4). Acquisition of those parcels would increase opportunities for habitat management through water level manipulation, and provide additional recreation. Parcels will be evaluated as they become available for potential purchase.

Backus Creek SGA Review and Approval

This plan was available for internal DNR and Tribal review between June 16, and June 30, 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. No Tribal comments were received. This plan was also available for public

review and comment between August 7, 2017 and September 20, 2017. No comments were received. This plan will be reviewed within 10 years of the approved date.

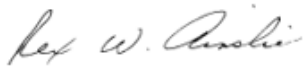
Approvals



October 19, 2017

Dale Rabe, Field Operations Manager

Date



October 30, 2017

Rex Ainslie, Regional Supervisor

Date