



Augusta Wildlife Area Interim Forest Management Plan

Property Identifiers

Property Name and Designation: AUGUSTA WILDLIFE AREA

County: EAU CLAIRE

Property Acreage: 2108

Forestry Property Code(s): 1814

Master Plan Date: Concept Element Document – May, 1979

Property Assessment

Augusta Wildlife Area (AWA) is a state owned property with the primary objective of providing waterfowl and upland game habitat. It is located 4 miles north of the City of Augusta, in Eau Claire County. This marsh and woodland property lies 1 mile south of Lake Eau Claire. It is bounded by Eau Claire County Forest acreage to the east and north, and privately owned woodland and farmland to the west and south. Kelly Road runs along the eastern portion of the property and CTH "G" is located along the west and north boundaries. Three small parking areas are located off CTH "G" and Kelly Rd.

LANDSCAPE AND REGIONAL CONTEXT

Hydrology: The AWA lies on the border between Central Sand Plains Ecological Landscape and Western Ridges and Coulees. It is more representative of the Central Sand Plains. This landscape has large areas of wetlands and a number of generally low-gradient streams that range from small coldwater streams to large warm water rivers. Major rivers include the Wisconsin, Black, Yellow, and Lemonweir. Natural lakes are rare, and are limited to riverine floodplains and a few scattered ponds within the bed of extinct Glacial Lake Wisconsin. The hydrology of this Ecological Landscape has been greatly disrupted by past drainage, channelization, impoundment construction, and groundwater withdrawal.

Drainage ditches are still visible on air photos of the AWA. The marsh area of the AWA makes up the headwaters of Brown's Creek, which feeds into Bridge Creek and eventually the Eau Claire River below the Lake Eau Claire dam. Lake Eau Claire is an impoundment of the Eau Claire River.

Current Land Cover: The Central Sand Plains Ecological Landscape is a mosaic of cropland, managed grasslands and scattered woodlots of pine, oak, and aspen. Many of the historic wetlands in the east were drained early in the 1900s and are now used for agricultural purposes. The western portion of this Ecological Landscape is mostly forest or wetland. Oak, pine, and aspen are the most abundant forest cover types.

HISTORY OF LAND USE AND PAST MANAGEMENT

Prior to settlement in the 1930's, the northern half of Augusta Wildlife Area was jack pine, northern pin (hill's) oak forest and barrens. The southern half of the property was oak -- white, black, and bur oak (with some white and red pine). Large areas of marshland covered the area. During the settlement era, the entire region was subject to timber harvest and probably was burned over by wildfire. Marshlands were drained. The DNR began purchasing acreage from 1942-1955 and the Augusta State Wildlife Area was created to restore wetlands.

Past management includes three flowages that were constructed in 1957, 1960 and 1966. In addition, potholes were created and ditches improved to provide habitat for mallards, blue-winged teal and wood duck. Current total wetland area is approximately 959 acres. Muskrats and beaver are common to the area. Today, AWA is managed primarily for waterfowl, ruffed grouse, and deer. Forest management has included timber harvesting, scarification, tree planting and alder shearing.



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CURRENT FOREST TYPES, SIZE CLASSES AND SUCCESSIONAL STAGES

AWA is 2,108 acres of a wetlands, pines, oak, aspen, and grass mosaic. Majority of the area is low and wet (45% of the acres are keg, lowland brush, marsh, and other wetland types). Uplands (oak 22% and aspen 18%) are the second and third largest cover types. All pines combined equal 12% (jack pine 9%, white pine 2%, and red pine 1%). The remaining acres are red maple (2%), grass (1%) and right of way/trails (1%).

Oak:

There are currently 394 acres of oak timber type. Inventory in 1979 showed 210 acres of oak. Due to the sandy soils and areas of high water table, the oak consists of mostly pin and black oak with site index that range from 45 to 60 feet at 50 years of age. These stands typically reach forest product maturity between 60 and 80 years of age. After that time, individual trees begin to decline in vigor and timber quality. As mortality occurs, red maple becomes established in the understory in the partial shade conditions. This invasion of red maple is a concern if it replaces oak regeneration in the future. As cavity trees and snags are an important habitat component, some oak mortality is desired. Management of the oak will use a 100-year rotation age to promote cavity and snag development, and at the same time regenerate some acreage to young oak.

Most of the AWA oak resource is between 70 and 90 years of age. Oak regeneration techniques including coppice harvest, shelterwood, and seed tree will be implemented in attempts to maintain oak acreage on the property. Scarification and maple elimination may also be needed. On average annually, approximately 7 acres of oak will be harvested to maintain the type. Since marketable sale volume often requires a 20 to 30-acre harvest size, an oak timber sale will be established approximately every 4 to 5 years. Harvests will often be a group of small 2 to 10-acre patches to create age diversity. This harvest rate will allow approximately 20% of the oak on the AWA (80 acres) to be removed from the harvest schedule in small patches to promote structural diversity and legacy trees. Harvesting at this rate will rotate about 200 acres over the next 30 years.

Aspen:

There are currently 362 acres of aspen timber type. Inventory in 1979 showed 568 acres of aspen. Aggressive harvesting in this type occurred during the 1980's and 90's because age distribution at that time was almost all 50 to 60 years of age. Aspen is a short lived, intolerant species that is an important component of upland habitat. Regeneration is primarily achieved through coppice harvesting (clearcut). Current age distribution includes about 80 acres of over mature aspen in the 60 to 80 year range. These acres are naturally converting over to primarily red maple and white pine as the aspen dies out. There are about 200 acres in the age range of 15 to 30 years old. These stands originated from the harvesting in the 1980's and 90's.

On average annually, approximately 7 acres of aspen will be harvested to maintain the type. Since marketable sale volume often requires a 20 to 30-acre harvest size, an aspen timber sale will be established approximately every 4 to 5 years. Management will be geared toward maintaining the aspen timber type acreage on the AWA by using a rotation age of 50 years.

Jack Pine:

There are 144 acres of jack pine timber type. Inventory in 1979 showed 329 acres of jack pine. Aggressive harvesting in this type also occurred during the 1980's and 90's because age distribution at that time was almost all 50 to 60 years of age. Jack pine, like aspen, is a short lived, intolerant species that is an important component of upland habitat. Regeneration is primarily achieved through clearcut harvesting. Scarification prior to harvest increases regeneration chances by exposing mineral soil for better seed germination. Planting may also be required to establish adequate regeneration. Current age distribution is mostly younger than 25 years of age. Management will be geared toward maintaining the jack pine timber type acreage on the AWA as it matures by using a rotation age of 55 years. Harvesting in the next 15 year period will minimal because of the current young age structure.



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White Pine:

There are 52 acres of white pine timber type on the AWA. Inventory in 1979 showed 13 acres of white pine. Although currently a minor component on the property as a primary type, there are areas of heavy white pine regeneration throughout the AWA and overall white pine acreage is anticipated to increase over time. White pine is a climax species on this landscape and natural succession will promote this species. Natural succession of oak, aspen and jack pine types often tends toward white pine development. Passive management areas will likely move toward white pine. Forest management practices to promote oak, aspen and jack pine will, in general, discriminate against white pine. Currently white pine occupies 5% of the property acreage. Over the next 30+ years this may increase to about 10%. Harvesting in white pine stands will be minimal and primarily consist of thinning out poor quality with the objective of growing large diameter, old growth in patches.

Red Maple and Central Hardwoods:

There are 103 acres of red maple and central hardwood timber types on the AWA. Inventory in 1979 showed 0 acres of maple. Although currently a minor component on the property as a primary type, many upland acres throughout the AWA contain moderate red maple regeneration and overall acreage is anticipated to increase over time. Red maple is a natural cohort with white pine, oak, and aspen on this landscape and natural succession will promote this species. Natural succession of oak, aspen and jack pine types often tends toward red maple development. Red maple provides soft mast for wildlife, but in general is less desirable than oak, aspen or jack pine. Red maple is currently 5% of the property acreage. Management will be geared toward limiting the increase of red maple acreage on this property. Harvesting in red maple stands will be minimal, but slowly increase over time.

WILDLIFE ACTION PLAN/SPECIES OF GREATEST CONSERVATION NEED

Species of Greatest Conservation Need (SCGN's) are mostly associated with the wetlands including, reptiles, amphibians, birds and insects. A small area on the northwest corner of the property is managed as barrens/grassland and has potential for a number of barrens related insects that are listed SCGN. Property objectives are to protect the wetlands and continue managing the small barrens acreage. The forested uplands offer great opportunities for "edge" game species and early successional "Species of Greatest Conservation Need" as identified within the state's Wildlife Action Plan.

CONSERVATION OPPORTUNITY AREA

Augusta Wildlife Area is listed in the Wildlife Action Plan's Implementation document for the Central Sand Plains Ecological Landscape and located within the Conservation Opportunity Area (COA) known as Pine Oak Barrens. Barrens attributes and management opportunities may be found on some upland areas. The northwest portion of the property was converted to open barrens/grassland in the early 2000's by removing a jack pine stand and red pine plantation. Prescribed fire has been used to maintain the open nature of this stand.

NATURAL HERITAGE INVENTORY - RARE SPECIES

At the time of this plan (2012) one federally listed endangered insect, one state threatened reptile, three insects of state special concern, and two aquatic species were listed within the general AWA geographic area. Forest management activities utilize rare species avoidance documents (for species that have these) or tailor management to avoid impacts to rare species such as using time of year restrictions, wetland BMP's etc. In some cases, demonstrating that habitat does not exist for a particular species in question will also be used. NHI screening will be conducted prior to all future management activities.



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HIGH VALUE CONSERVATION FORESTS (HCVF) OR OTHER RESOURCES/ NATURAL COMMUNITY TYPES LIMITED IN THE LANDSCAPE

The northwest corner is managed as barrens.

BIOTIC INVENTORY STATUS

There is no known biotic inventory for this property.

INVASIVE SPECIES

There are no known invasive species as an inventory has not been taken. There is high potential for invasive establishment due to the access by recreationists.

RECREATIONAL USES

Hunting and trapping are the primary recreation uses of this property. Hiking trails and gravel roads provide access into the interior of the property. The area consists of gently rolling, sandy upland soils interspersed with lowland peat and marshlands.

CULTURAL AND ARCHEOLOGICAL SITES (INCLUDING TRIBAL SITES)

No archaeological or historical sites have been identified by the Wisconsin Historical Society on the AWA. An old homestead known as "Troubled Waters" is located in the northeast corner near the intersection of Kelly Road and CTH G. An abandoned well on the far south end upland acreage was capped in 2010.

SOILS

Most soils in this area are deep alluvial sand deposits. These soils are excessively drained, with very rapid permeability, very low available water capacity, and low nutrient status. In low-lying terrain where silty lacustrine material impedes drainage, the water table is very close to the surface. Such areas are extensive in the western part of the Ecological Landscape, where soils may be poorly drained with surfaces of peat, muck or mucky peat.

FUTURE MANAGEMENT

The majority of the property is managed as a wetland complex to provide habitat for waterfowl and upland species. The primary forest management objective is to provide younger forest for both game species and early successional Species of Greatest Conservation Need. A second objective is to provide small blocks of old forest and scattered old trees for mast production, cavity trees and snag trees for wildlife benefits. Upland management consists of maintained trails along with small timber sales to provide habitat for grouse, woodcock, and mammals including deer, bear and furbearers. Future management will include small scale timber sales, prescribed burning, water level management (control structures), trail maintenance, etc. The property maintains nesting boxes for waterfowl.

The table below shows total acreage by timber type and projected allowable harvest from 2012 to 2026.

Timber Types	Acres	Annual Allowable Cut
Oak	394	7
Aspen	362	7
Jack Pine	144	1
White Pine	52	1
Red Maple/Central Hardwoods	103	1
Misc.	94	3
Totals	1149	20



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Forest Management Objectives:

1. Maintain variety of timber types through forest management practices with primary focus on oak, aspen and jack pine.
2. Conduct timber sales to provide a variety of succession stages.
3. Use harvest patterns to meet nesting, shelter, and feeding habitat needs.
4. Identify invasive species and implement practices to eliminate/minimize impact to property.
5. Identify rare/endangered species and protect/provide habitat.

Property Prescriptions

1. Establish sales to maintain oak, aspen and jack pine.
2. Maintain barrens habitat in the northwest corner through periodic prescribed burning.
3. Maintain proper water levels in flowages to provide aquatic habitat.
4. Maintain trail system with periodic mowing and control vehicular traffic.

Approvals:

Regional Ecologist Date

Forester Date

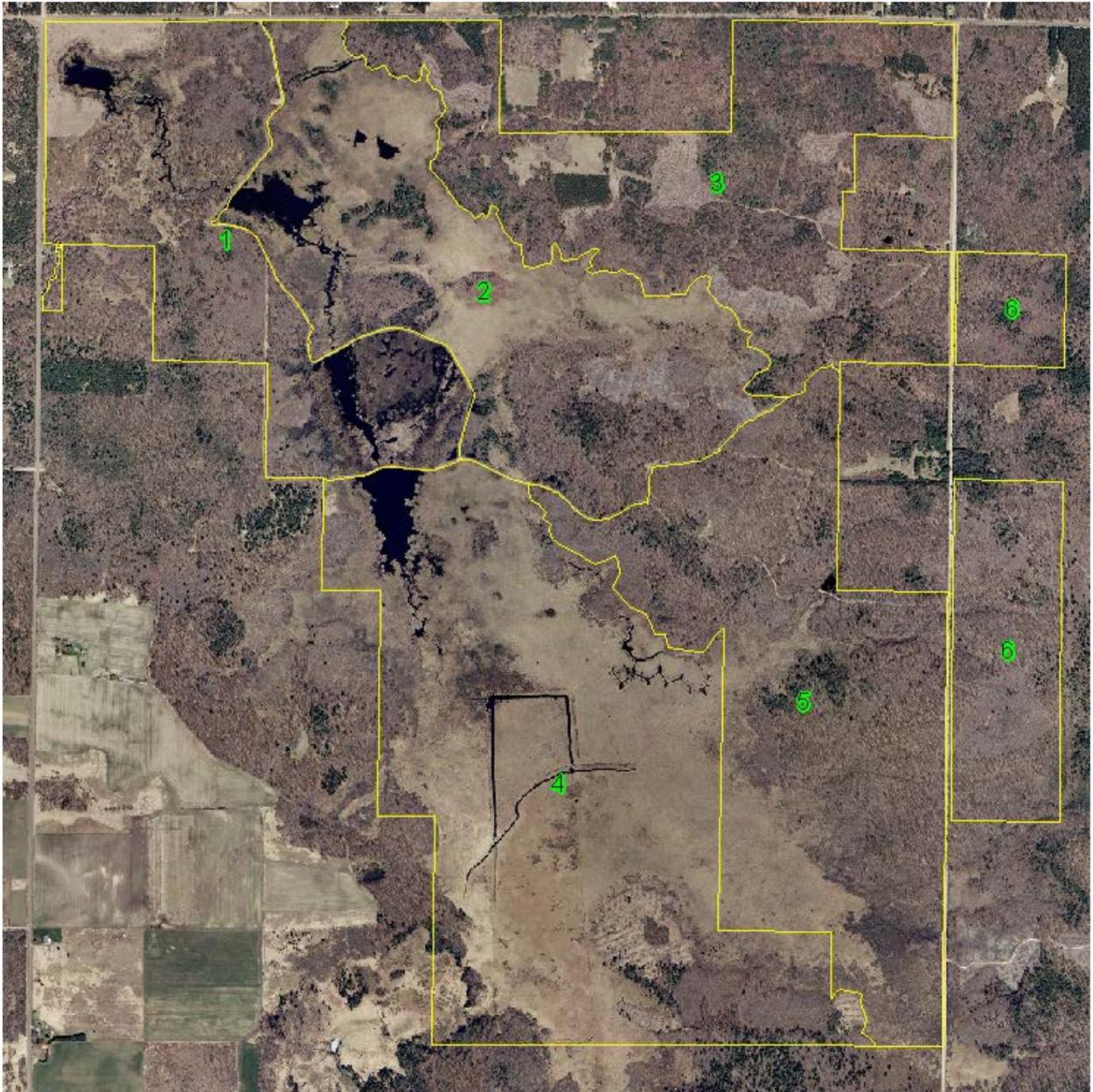
Property Manager Date

Area/Team Supervisor Date



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AIR PHOTO OF AUGUSTA WILDLIFE AREA COMPARTMENTS





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MAP OF AUGUSTA WILDLIFE AREA

