



South Beaver Creek Interim Forest Management Plan

Property Identifiers

Property Name and Designation: **SOUTH BEAVER CREEK WILDLIFE AREA**

County: **JACKSON**

Property Acreage: **1,120 acres**

Forestry Property Code(s): **2709**

Master Plan Date: **1986. Estimated start date for NR 44 compliant Master Plan: 2014**

Property Assessment

South Beaver Creek Wildlife Area (SBCWA) is a state owned property located west of Melrose in western Jackson County. The property consists of upland hardwood forests with a large impoundment of water and some smaller scrapes. South Beaver Creek flows through the property.

This property has sedge meadow, alder thicket, shrub-carr and a hard water stream.

LANDSCAPE AND REGIONAL CONTENT

Hydrology: The SBCWA lies in the Western Coulee and Ridges Ecological Landscape. Dendritic drainage patterns are well-developed in this mostly unglaciated Ecological Landscape. Natural lakes are restricted to the floodplains of large rivers. Large warm water rivers are especially important here, and include the Wisconsin, Chippewa, and Black. The Mississippi River forms the Ecological Landscapes' western boundary. Numerous spring-fed (coldwater) headwater streams occur here. Cool water streams are also common.

Current Land Cover: The Western Coulee and Ridges Ecological Landscape is a mosaic of forest, cropland and grassland with wetlands mostly in the river valleys. Primary forest cover is oak and hickory. Maple and basswood forests, dominated by sugar maple, basswood and red maple, are common in areas that were not burned frequently. Bottomland hardwoods dominated by silver maple, swamp white oak, river birch, ashes, elms and cottonwood are common within the floodplains of the larger rivers. Relict "northern" mesic conifer forests composed of hemlock, white pine and associated hardwoods such as yellow birch are rare but do occur in areas with cool, moist microclimates. Dry rocky bluffs may support xeric stands of native white pine, sometimes mixed with red or even jack pine. Prairies are now restricted to steep south or west facing bluffs, unplowed outwash terraces along the large rivers, and a few other sites. They occupy far less than 1% of the current landscape. Mesic tall grass prairies are now virtually nonexistent except as very small remnants along rights-of-way or in cemeteries.

HISTORY OF LAND USE AND PAST MANAGEMENT

The first land parcel for SBCWA was purchased in 1959. Additional land was purchased through the scattered wetlands program and in 1979 the Natural Resources Board approved a "mini-wildlife area" proposal and approved the present project boundary. The property has been actively managed through land acquisition, timber harvests, prescribed fire, sharecropping and



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pheasant stocking. The property was the first official release site of turkeys in Jackson County. The primary objective is to provide hunting and trapping opportunities; common game species include: deer, Turkey, Ruffed Grouse, rabbits, waterfowl, squirrels and stocked Pheasants. Maintaining wildlife diversity and healthy game species populations are achieved through habitat management.

In approximately 1998, a major wind event occurred on the property impacting at least 200 acres of which a portion was salvaged via commercial timber harvest. Both the blow down and harvest created optimal conditions for both white-tailed deer and Ruffed Grouse.

Most stands were likely grazed and commercially logged since European settlement.

Forest management has included tree and shrub plantings and timber harvesting.

PROPERTY CONTEXT/LANDSCAPE

Contextually, SBCWA is located on the edge of an identified Conservation Opportunity Area (COA) as identified within the Wildlife Action Plan's implementation document for the Western Coulee and Ridges Ecological Landscape. This COA was identified for its' large block forest opportunities. However, the property itself is heavily dissected and fragmented with open wetland and other open upland areas totaling 51% of the property. Additionally, the edge to interior ratio is high do to the multi-linear rather than block shape of the property. Subsequently, opportunities for large block old forest management for area sensitive forest interior species are limited. However, this more fragmented setting offers great opportunities for "edge" game species and early successional "Species of Greatest Conservation Need" as identified within the state's Wildlife Action Plan. See below for species/opportunities.

WILDLIFE ACTION PLAN/SPECIES OF GREATEST CONSERVATION NEED

This property is specifically listed in the Wildlife Action Plan's Implementation document for the Western Coulee and Ridges Ecological Landscape (WCREL) for its' Driftless Area Features of Continental Significance. Two priority natural community types are listed in the document that the property contains; Shrub-carr (in part typed "lowland brush" in forest recon), and Southern Dry-mesic Forest (typed "Oak" in forest recon). Species of Greatest Conservation Need associated with Shrub-carr, early successional Southern Dry-mesic forest, as well as the Alder thicket/wetlands/open water, planted warm season grasslands, tiny remnant prairie, and fields of the property include; Northern Bobwhite Quail, American Woodcock, Blue-winged Teal, four-toed salamander, Bell's Vireo (shrubs in open grassland/wetlands), Blue-winged Warbler, Brown Thrasher, Field Sparrow, Whip-poor-will, Willow Flycatcher and Pickerel Frog (all but American Woodcock are High Priority SCGN's for WCREL). Management for early successional forest, sedge meadow, shrub wetlands and open water, and warm and cool season grass fields will not only benefit these SCGN's but will also greatly benefit game species such as white-tailed deer, Pheasants, Turkey, Ruffed Grouse, Blue-winged Teal, quail, Woodcock, and rabbits.

CONSERVATION OPPORTUNITY AREA

The SBCWA is located on the edge of an identified Conservation Opportunity Area (COA) as identified within the Wildlife Action Plan's implementation document for the Western Coulee and Ridges Ecological Landscape. This COA was identified for its' large block forest opportunities. See above under "Property context/landscape" for limitations of this property to address the main focus of this COA.

NATURAL HERITAGE INVENTORY (NHI)/RARE SPECIES



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No rare species are listed in the Natural Heritage Inventory database at the time of this writing. However, 3 natural community type “element occurrences” (EO’s), and one element occurrence for a stream type exist for the property within the database. They are; alder thicket, shrub-carr, and southern sedge meadow, and a fast, hard, warm stream. The alder thicket, shrub-carr, and southern sedge meadow are locally significant as these community types are limited in the Western Coulees and Ridges Ecological Landscape and where they do exist, they tend to be highly degraded.

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

No High Value Conservation Forests have been identified on the South Beaver Creek Wildlife Area.

BIOTIC INVENTORY STATUS

Master Plan Biotic Inventory not complete.

CULTURAL AND ARCHAEOLOGICAL SITES (INCLUDING TRIBAL SITES)

There are no known historical or archaeological sites on this property.

RECREATIONAL USES

The property receives heavy visitation during the annual gun deer season, other uses include trapping, birding, hiking and fishing. It is especially noted for waterfowl, deer, Turkey, Pheasant and bear. There are hunting walking trails throughout the property.

INVASIVE SPECIES

It is noted in the “Current Forest Types, Size Classes and Successional Stages” the recon was completed in 2007 in the winter months. Invasive species were not noted during this recon due to the time of year the recon was taken. However, there are several non-native and native invasive plant species growing on the property that have been observed since the recon was taken. The non-native invasive plant species are reed canary grass, honeysuckle, buckthorn, and autumn olive. The native invasive species are prickly ash, wild grape vines and box elder. Control of these invasive species needs to be considered for future forest management activities and for retaining the grass wetland cover types in their current condition or when improving the current conditions.

SOILS

Most soils in the area are windblown loess of varying thickness, with alluvium in the floodplains. Organic soils, especially peats are rare and formed over thousands of years in old oxbows of post glacial streams. Houghton, mainly comprised of herbaceous organic material and frequently flooded is the soil type for a majority of the property. Ettrick is found on the flood plain area consisting of silty alluvium. Norden and Seaton are components found on the hills, containing loess over loamy and sandy residuum weathered from glauconitic sandstone.

CURRENT FOREST TYPES



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South Beaver Creek Wildlife Area is 1,120 acres of a wetlands, central hardwoods, oak, aspen, and grass mosaic. Recon was completed in 2007 during the winter months. The three largest cover types (also called timber types) are wetlands, central hardwoods, and grasses/herbaceous vegetation. The wetland cover types are keg, lowland brush, and marsh on 332 acres or 30% of the property.

Central hardwood timber (cover) types make up the property's second largest timber type on 313 acres or 28%. The size classes are sapling and seedling size trees (0 to 5 inches in diameter) on 212 acres and pole sized timber (5 to 11 inches in diameter) on 101 acres.

The third largest cover type is grasses or herbaceous vegetation on 234 acres or 21%. Included in this grass or herbaceous vegetation cover type is crop land that is sharecropped. In the future when recon or maps of the property are updated the crop land will be delineated as a unique timber type.

The remaining timber (cover) types are upland timber types consisting of oak – 151 acres or 13%; aspen – 30 acres or 3%; upland brush – 22 acres or 2%; conifer timber types – 19 acres or 1%; white birch – 12 acres or 1%. The oak timber type has 47 acres in the sapling and seedling size class, 59 acres in the pole sized timber class, and 45 acres in the large saw timber size class (15 plus inches in diameter). The aspen timber type has two size classes – 21 acres in the sapling and seedling size class and 9 acres in the pole-sized timber size class. The conifer and white birch timber types are all pole-sized timber – 31 acres. There is one remaining miscellaneous timber type of right of way/trails – 7 acres or 0.6%.

FUTURE MANAGEMENT

Forest Management Objectives:

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.

1. Maintain oak cover types where feasible.
 - a. Diversify age classes with emphasis on developing younger stands
 - b. Crop tree release oak in young stands
 - c. Promote/retain larger diameter trees
 - d. Increase coarse woody debris
2. Promote other early successional forest types
 - a. Promote aspen and white birch.
 - b. Several of the stands with size classes ranging from pole timber sized timber (5 to 11 inches) to large (15 plus inches) saw log sized timber in the central hardwood and oak timber types have been degraded due to major weather events. Rotating some of these stands prior to their rotation age to promote a better quality forest cover will also promote early successional forest types.
3. All stands
 - a. Consider planting opportunities for desirable species such as oak.
 - b. Control invasive plant species (especially autumn olive, buckthorn, honeysuckle)
 - c. Promote the growth of large crowned pines for wildlife and aesthetics where they exist.
4. Wetlands, upland brush, grasses/herbaceous vegetation
 - a. Maintain a shrub component for both game species and SCGN's.
 - b. Protect the current wetland cover types.



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Property Prescriptions (Identify specific and pertinent prescriptions by area or forest type, including passive management areas, extended rotation, and other information that will help achieve the objectives):

CENTRAL HARDWOODS – Manage utilizing both even and uneven aged silvicultural methods such as thinning, seed tree, shelterwood, clear-cuts, as well as timber stand improvement methods and other techniques described in the DNR Silviculture and Forest Aesthetics Handbook to regenerate these stands. Promote tree species for wildlife food sources that produce mast, such as, oaks (red, black, white, bur, and swamp), black cherry, hickory, basswood, maples, and others. Within the degraded central hardwood stands consider harvesting prior to rotation age to improve the quality of this forest cover type. Utilize even aged harvest methods to promote the young forest component on the property.

OAKS – Where possible extend even-age rotation age constraints beyond the 100 years to retain oak on the property and spread the oak harvest schedule over a greater period of time. Maintain and promote oak through planting, timber stand improvement methods, prescribed fire, thinning, seed tree, shelterwood, clear-cuts, and other techniques described in the DNR Silviculture and Forest Aesthetics Handbook. Promote the growth and retention of large oak through techniques such as thinning, extended rotation, and managed old forest. Stands for retention should be sited on north slopes/richer sites, and reserve/legacy trees should be retained as groups or individuals throughout the property within harvested stands. Prioritize regeneration harvests on south and west facing stands where oak regeneration success is greater, including some of the mid-age stands in order to diversify oak age classes. Within the degraded oak stands consider harvesting prior to rotation age to improve the quality of this forest cover type. Consider site preparation methods such as chemical and mechanical control of undesirable species as well as soil scarification to reduce competition for natural oak regeneration and planting of trees/acorns if needed.

ASPEN/WHITE BIRCH – Clear-cut to regenerate these stands.

CONIFER PLANTATIONS – Thin plantations every 8-10 years. Leave dead and dying trees for wildlife habitat and course woody debris development. Consider planting additional small plantations on the property for wildlife habitat and forest diversity.

WETLANDS – Use a variety of methods such as prescribed fire, mechanical, and chemical treatment to control invasive species growing within the wetland cover types to improve the quality and function of these wetland areas. Use Best Management Practices for water quality to protect hydrology of wetlands and riparian corridors.

UPLAND BRUSH – Use a variety of methods such as prescribed fire, mechanical, and chemical treatment to control invasive species growing within these cover types to improve the quality and function of these areas.

GRASSES/HERBACEOUS VEGETATION – This cover type also includes crop land being sharecropped. In the future, delineate the crop land from the grasses and herbaceous vegetation. With this being one of the largest cover types on the property, consider planting oak for its importance as a wildlife species and to diversify age classes of this type. Also consider planting native shrubs as well as some smaller areas to conifer tree plantations for wildlife habitat diversity.

ALL STANDS – Control invasive plant species with a variety of methods such as mechanical and chemical treatment as well as prescribed fire.



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Approvals:

Regional Ecologist Date

Forester Date

Property Manager Date

Area/Team Supervisor Date