



Borst Valley Interim Forest Management Plan

Property Identifiers

Property Name and Designation: **BORST VALLEY WILDLIFE AREA**

County: **TREMPEALEAU**

Property Acreage: **1,343 acres**

Forestry Property Code(s): **6204**

Master Plan Date: **None, Estimated start date for NR 44 compliant Master Plan: 2014**

Property Assessment

Borst Valley Wildlife Area (BVWA) is a state owned property in the Driftless Area of Trempealeau County, located seven miles northwest of the City of Independence. The property contains a mosaic of upland hardwoods, marshland and grassland. The topography consists of narrow ridges and broad valleys. The primary objective of the property is to provide public hunting, fishing, and trapping opportunities as well as other outdoor recreational opportunities such as hiking and cross-country skiing. Common game species found on the property include: deer, turkey, Ruffed Grouse, rabbits, waterfowl, squirrels and stocked Pheasants. Maintaining wildlife diversity and healthy game species populations are achieved through habitat management.

LANDSCAPE AND REGIONAL CONTEXT

Hydrology: The BVWA 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



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BVWA first property purchase was in 1968 and was officially established as a State Wildlife Management Area in 1979. Since the initial purchase BVWA has grown to 1,343 acres. The property has been actively managed through land acquisition, grassland plantings, establishment of hunter walking trails and wetland development.

Forest management has included tree and shrub plantings and timber harvesting. Management within the State Natural Area sedge meadow including one prescribe burn in spring 2010 on the east side of Sunshine Valley Road.

PROPERTY CONTEXT/LANDSCAPE

Contextually, BVWA is situated in an area that is moderately dissected and fragmented with agricultural fields and other open areas. Subsequently, an opportunity for large block old forest development for area sensitive forest interior birds is 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

Although the property is not specifically listed in the Wildlife Action Plan’s Implementation document for the Western Coulee and Ridges Ecological Landscape (WCREL), three priority natural community types are listed in the document that the property contains; Coldwater streams, Southern Dry-mesic Forest (typed Oak in forest recon), Springs and Spring Runs. Species of Greatest Conservation Need associated with Coldwater streams, Springs and Spring runs, early successional Southern Dry-mesic forest, as well as the shrub lands, wetlands, planted warm season grasslands and fields of the property include; Bell’s Vireo (shrubs in open grasslands and sedge meadow), Blue-winged Warbler, Brown Thrasher, Field Sparrow, Northern Bobwhite Quail, American Woodcock, Red-headed Woodpecker, Whip-poor-will, Willow Flycatcher and Pickerel Frog (all but American Woodcock area High Priority SCGN’s for WCREL). Management for early successional forest, sedge meadow, and warm and cool season grass fields will also greatly benefit game species such as white-tailed deer, Pheasants, Turkey, Ruffed Grouse, Quail, Woodcock, and rabbits.

CONSERVATION OPPORTUNITY AREA

The property does not fall within a Conservation Opportunity Area as identified within the Wildlife Action Plan.

NATURAL HERITAGE INVENTORY (NHI)/RARE SPECIES

No rare species are listed in the Natural Heritage Inventory database at the time of this writing. A rare natural community; “Oak Opening”, is known within two miles of the property at Chimney Rock State Wildlife Area.

STATE NATURAL AREA

The property contains the 21 acre Borst Valley Sedge Meadow State Natural Area (SNA) (#624). Hunting, trapping, and other recreational activities ARE allowed in the SNA. See the link for more details on the State Natural Area.

<http://dnr.wi.gov/topic/Lands/naturalareas/index.asp?SNA=624>



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Borst Valley Sedge Meadow features a Driftless area sedge meadow lying in the Sunshine Valley portion of BVWA. Numerous seeps help maintain this community and probably helped limit past grazing to extremely dry conditions. Site diversity is good, especially for being within the Driftless Area where sedge meadows are relatively uncommon. Sedge species are abundant and include lake, water, fringed, inland, tussock and wolf sedge. Other species present are bulblet water-hemlock, crested wood fern, cinnamon willow-herb, boneset, bottled gentian, fowl manna grass, marsh fern and culver's root. Borst Valley Sedge Meadow is owned by the DNR and was designated a State Natural Area in 2010.

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 Borst Valley Wildlife Area.

BIOTIC INVENTORY STATUS

Master Plan Biotic Inventory not complete.

CULTURAL AND ARCHAEOLOGICAL SITES (INCLUDING TRIBAL SITES)

A known cemetery site is located on the property that has been recorded with the state historical society. Management practices will be taken into consideration to ensure the site will not be disturbed.

RECREATIONAL USES

The property receives heavy visitation during the annual gun deer season, other uses include upland bird hunting, trapping, and hiking. It is especially noted for rabbits, squirrels, deer, turkey, ruffed grouse, waterfowl and stocked pheasants. There are hunter walking trails throughout the property.

INVASIVE SPECIES

A moderate level of black locust, located on the grasslands, is being chemically controlled. Low levels of buckthorn and honeysuckle are located in the interior portion of the property. High levels of wild parsnip are located along the road side ditches of the property.

SOILS

Most soils in the area are windblown loess of varying thickness, with alluvium in the floodplains. Organic soils, especially peats are rare. The soil is well-drained containing a subsoil of sandy loam to silty clay loam on uplands. The Eleva soil series is a majority of the area, which are gently sloping to steep, well drained soils on sandstone ridges and valleys. These soils form in coarse, loamy sandstone residuum underlain by cemented sandstone bedrock in steep terrain.

CURRENT FOREST COVER

BVWA has 862 forested acres (2005 reconnaissance) that are comprised of: central hardwoods, 413 acres (48%) - 50% is 43 years and older with size classes of 5-11" and 11-15", oaks, 277 acres (32%) – 99% older than 85 years in the 11-15" and 15+" size classes, bottomland hardwoods, 79 acres (9%) – 100% is 40 years of age in the 5-11" size class, white birch, 55 acres (6%) – 50% older than 56, in the 5-11" size class, aspen, 16 acres (2%) – 100% is over 46 years



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of age and is in the 11-15" size class with a rotation age of 50 years, red Pine, 16 acres (2%) and white Pine, 6 acres (1%). Red and white pine plantations are mostly 36 to 45 years old and are in the size class of 5-9" and 9-15".

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. Regenerate oak stands where feasible and promote oak in young mixed hardwood stands. Look for oak savanna (oak opening) restoration opportunities in especially low quality oak stands.
 - d. Promote/retain larger diameter trees.
2. Promote other early successional forest types.
 - a. Promote aspen and white birch.
 - b. Natural regeneration systems for central hardwoods can utilize even aged methods to enhance the young forest component on the property.
3. All Stands
 - a. Consider planting opportunities for desirable species such as oak.
 - b. Control invasive plant species (e.g., black locust, buckthorn, honeysuckle).
 - c. Promote the growth of large crowned pines for wildlife and aesthetics.
4. Fields
 - a. Maintain a shrub component especially in the cool season grass areas for both game species and SCGN's.

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, group selection, as well as timber stand improvement methods and other techniques described in the DNR Silviculture and Forest Aesthetics Handbook to regenerate these stands. Promote wildlife species such as oaks, black cherry, hickory, basswood, hard maple and others that would keep the stands diverse.

BOTTOMLAND HARDWOODS – The majority of this type is located along riparian areas and should be passively managed. On drier sites, utilize 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.

OAK - Utilize even-aged rotation age constraints to 100 years to spread oak harvest schedule. Maintain and promote oak through planting, timber stand improvement methods, prescribed fire, thinning, seed tree, shelterwood, coppice 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



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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. Manage for savanna (oak opening) by treating undesirable species chemically, mechanically or by fire with the goal of maintaining an oak component on the landscape.

ASPEN/WHITE BIRCH – Coppice harvest to regenerate these stands.

UPLAND FIELDS/SEDGE MEADOW SNA – Prescribed fire, as well as mechanical and chemical treatment of undesirable species will be used to maintain these areas.

RED and WHITE PINE – Thin pine plantations every 8-10 years. Promote the growth of large-crowned trees for wildlife and aesthetics. Leave dead and dying trees for wildlife habitat.



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Approvals:

Regional Ecologist Date

Forester Date

Property Manager Date

Area/Team Supervisor Date



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