



Chimney Rock Interim Forest Management Plan

Property Identifiers

Property Name and Designation: **CHIMNEY ROCK WILDLIFE AREA**

County: **TREMPEALEAU**

Property Acreage: **627 acres**

Forestry Property Code(s): **6205**

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

Property Assessment

Chimney Rock Wildlife Area (CRWA) is a state owned property in the Driftless Area of Trempealeau County, located seven miles northwest of the City of Independence. The property contains upland hardwoods, marshland, grassland and some farmland. The topography consists of narrow ridges and broad valleys. The valley floor along Hawkinson Creek is a mosaic of Type II, III, VI wetlands. Hawkinson Creek is a Class III trout stream.

LANDSCAPE AND REGIONAL CONTEXT

Hydrology: The CRWA 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 tallgrass 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 for CRWA was purchased in 1959 to protect the wetland habitat that exists on the property. Since the initial purchase CRWA has grown to 627 acres. The property has been actively managed through land acquisition, grassland plantings, establishment of hunter walking trails and wetland development. The primary objective is to provide hunting and trapping opportunities; common game species include: deer, turkey, ruffed grouse, rabbits and squirrels.



Chimney Rock Interim Forest Management Plan

Maintaining wildlife diversity and healthy game species populations are achieved through habitat management.

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

PROPERTY CONTEXT/LANDSCAPE

Contextually, CRWA is situated in an area that is moderately dissected and fragmented with agricultural fields and other open areas. Subsequently, opportunities for large block old forest development for area sensitive forest interior birds is limited. However, this more fragmented setting offers great opportunities for "edge" 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 CONSERVAITON 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), and oak opening. Species of Greatest Conservation Need associated with Coldwater streams, oak opening, early successional Southern Dry-mesic forest, shrublands, wetlands, planted warm season grasslands and fields of the property include; Bells Vireo (shrubs in open grasslands/wetlands), 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).

CONSERVATION OPPORTUNITY AREA

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

NHI/RARE SPECIES

The Natural Heritage Inventory database indicates that 2 special concern species were identified within the general vicinity of the Wildlife Area.

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

Chimney Rock Oak Savanna State Natural Area contains a globally rare oak opening.

<http://dnr.wi.gov/topic/Lands/naturalareas/index.asp?SNA=625>

BIOTIC INVENTORY STATUS

Master Plan Biotic Inventory not complete.

CULTURAL AND ARCHEOLOGICAL SITES (INCLUDING TRIBAL SITES)

RECREATIONAL USES

Hunting and birding are primary recreation uses of this property. It is especially noted for rabbits, squirrels, deer, turkey and ruffed grouse. There are hunter walking trails throughout the property.



Chimney Rock Interim Forest Management Plan

INVASIVE SPECIES

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

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. A portion of the property contains the Hixton soil series, which consists of well drained soils that are moderately deep to a paralithic contact with sandstone on hills on bedrock controlled uplands. These soils formed in loess and loamy slope alluvium underlain by siliceous sandy residuum from the underlying sandstone.

CURRENT FOREST COVER

CRWA has 389 forested acres (2005 reconnaissance) that are comprised of: oaks, 236 acres (38%) – 63% is older than 100 years in the 11-15" and 15+" size classes with the remaining of 75 years old, central hardwoods, 151 acres (24%) – 46-65 years and older with size classes of 5-11" and 11-15", red and white pine stand, 2 acres (0.03%) – plantation is 47 years old in the 5-9" and 9-15" size classes.

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.
 - b. Thin to achieve larger diameter trees.
 - c. Crop tree release oak in young stands.
 - d. Regenerate oak stands where feasible and promote oak in young mixed hardwood stands. Utilize oak regeneration methods, including planting, prescribe burning and post-harvest treatments.
 - e. Maintain large diameter open grown trees in the State Natural Area portion of the property and promote an open understory to maintain and stimulate light dependent ground layer species associated with this rare natural community type.
2. Promote other early successional forest types.
 - a. Promote aspen and white birch where it exists within other stand types.
 - b. Natural regeneration systems for central hardwoods can utilize both even and uneven-ages methods, pending the site quality, stand composition, advanced regeneration, and stand context. Even-aged methods will enhance the young forest component on the property.
3. All Stands
 - a. Consider planting oak to maintain this type in some of the fields that haven't been planted to native grasses.
 - 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



Chimney Rock Interim Forest Management Plan

- a. Maintain and promote shrubs and young trees especially in the cool season grass areas for both game species and species of greatest conservation need.

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 ages silvicultural methods such as thinning, seed tree, shelterwood, clear cut, as well as timber stand improvement methods and other techniques described in the DNR Silviculture and Forest Aesthetics Handbook to regenerate these stands. Promote/retain wildlife species such as red, white, and black oak, black cherry, hickory, basswood, hard maple and others that would keep the stand diverse.

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, clear cut, 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. Manage areas adjacent to the State Natural Area to provide a structurally similar habitat of scattered large crowned open grown oaks.

RED/WHITE PINE – Maintain healthy conifers through periodic thinning and developing more diverse understory vegetation for wildlife. Promote growth of large crowned pines for wildlife and aesthetics. Leave dead and dying pines for cavity and nesting birds and course woody debris.

WETLANDS – There is 161 acres of Wetland that provide invaluable filtration and flood storage capacity. RMZ best management practices will protect these wetlands during harvest and other operational activities by road location, skid trail rehab and seasonal logging that promotes less rutting and erosion.

UPLAND FIELDS – There is 74 acres of upland fields, which will be annually examined for afforestation potential to provide young forest habitat and develop larger forest blocks. Natural succession could be used as an alternative where desirable seed sources are present.

GRASSLANDS – There is 3 acres of warm season grassland which will be maintained by prescribed burning, mowing and spot spraying of undesirable species..

Chimney Rock Oak Savanna State Natural Area (see website above for map)

Natural processes, processes that mimic natural disturbance patterns, and prescribed fire will determine the structure of the prairie and associated southern dry forest. Manage to create overstory conditions that allow enough light to penetrate the canopy and reach the forest floor to stimulate light dependent understory savanna and oak woodland species that are currently suppressed from inadequate light

Manage to restore the site through prescribed fire, non-commercial understory manipulation, and timber harvests to enhance the oak opening natural community. Timber harvests will focus on removal of central and northern hardwood species (primarily non-oak and non-hickory species), some thinning of suppressed oak where dense patches occur (leaving largest diameter/crowned individuals) or where small crowned individuals are shading open grown, larger crowned trees.



Chimney Rock Interim Forest Management Plan

Property is continually monitored for invasive plant species and control practices such as prescribed fire, hand pulling, chemical and mechanical control will be implemented to eliminate or reduce negative impacts.

Approvals:

Armond D. Barty 3/14/2013
Regional Ecologist Date

David G. Debus 3/21/13
Forester Date

Timothy E. Baber 3/14/13
Property Manager Date

Timothy E. Baber 3/14/13
Area/Team Supervisor Date



Chimney Rock Interim Forest Management Plan