



# Lakes Coulee Interim Forest Management Plan

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## Property Identifiers

Property Name and Designation: **LAKES COULEE WILDLIFE AREA**

County: **TREMPEALEAU**

Property Acreage: **762 acres**

Forestry Property Code(s): **6206**

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

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## Property Assessment

Lakes Coulee Wildlife Area (LCWA) is a state owned property located two miles southwest of the City of Blair in Trempealeau County. The property is located in the North Central US Driftless and Escarpment section as well as the Western Coulees and Ridges Ecological Landscape which are both characterized by rolling to hilly topography. 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 CONTENT

**Hydrology:** The LCWA 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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The state acquisition on the LCWA occurred in 1960 as part of the Scattered Wetlands Program and has grown to 762 acres. In spring of 1979 the Natural Resources Board approved a “mini-wildlife” area proposal and the initial wildlife area property boundary was established. The Department of Transportation acquired and transferred an additional 200 acres to the DNR in 2005. The area is host to a Class III trout stream, based on a 1971 survey and is stocked annually with brook trout. The LCWA has preserved a portion of the wetland complex along Lakes Coulee creek and an unmanned tributary with Types II, II and VI wetlands.

Presettlement vegetation included both oak savanna (oak openings) and oak forest.

The property has been actively managed through land acquisition, grassland plantings, prescribe burning, 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, waterfowl, squirrels and stocked Pheasants. 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, LCWA is situated in an area that is moderately to heavily dissected and fragmented with agricultural fields and other open areas. Additionally, the property itself contains over 50% open, nearly treeless habitat. 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 (SCGN’s) 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: 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 area 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 property does not fall within a Conservation Opportunity Area as identified within the Wildlife Action Plan.

## NATURAL HERITAGE INVENTORY (NHI)/RARE SPECIES



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Two rare species were identified in the Natural Heritage Inventory database as being within, or close to this property. One is a fish species listed as Endangered in Wisconsin and is associated with the Trempealeau River. The other is a plant listed as special concern which is associated with open woods.

## 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 Lakes Coulee Wildlife Area.

## BIOTIC INVENTORY STATUS

Master Plan Biotic Inventory not complete.

## CULTURAL AND ARCHAEOLOGICAL SITES (INCLUDING TRIBAL SITES)

The property contains an archaeological indicator which is protected by perennial grass cover maintained for wildlife.

## RECREATIONAL USES

The property receives heavy visitation during the annual gun deer season, other uses include upland bird and waterfowl hunting, trapping, birding and hiking. It is especially noted for rabbits, squirrels, deer, waterfowl, Turkey, Ruffed Grouse and stocked Pheasants. The property has a Class III trout stream. There are hunter walking trails throughout the area.

## INVASIVE SPECIES

Low levels of black locust and honeysuckle are found in the interior of the property. Wild parsnip is found at low levels along the road sides of the property. Moderate levels of buckthorn and honeysuckle are located throughout the property. Reed canary grass could be a concern in the lowland swamp.

## SOILS

Most soils in the area are windblown loess of varying thickness, with alluvium in the floodplains. Organic soils, especially peats are rare. Dominant soils are Gale silt loam which is formed in about two feet of loess over sandstone and Norden loam, formed in loess mixed with greensand material. Hixton loam occurs where greenstone is absent. Boone sand, formed over nearly pure quartz is also common. The majority of the lowlands within the property are comprised of Houghton muck and Ettrick silt loam. The Houghton muck soil type has deep, nearly level, very poorly drained subsoil overlain by organic sediment. The upland sites are comprised of Hixton loam, a moderately deep, well drained soil with loam subsoils. These soils are moderately permeable with moderate available water capacity and medium natural fertility. Both creeks flowing through the property are poorly drained silt loams and muck in the valley floors.

## CURRENT FOREST COVER

LCWA has 326 forested acres (2007-2008 reconnaissance) that are comprised of: oak, 212 acres (27%) – averaging 90 years of age with size class of 15+”, oak is naturally converting to central hardwoods on the more mesic sites, aspen, 60 acres (8%) – 25 acres of 0-5” size class and 35 acres of 11-15” size class, accessible aspen was regenerated in 2010, central hardwoods, 30



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acres (4%) – 30 acres is 40 years of age and in the 5-11" size class, pine 24 acres (3%) – 35 years of age and in the 9-15" size class, nine separate plantings comprised of red and white pine. Accessible pines were thinned in 2010.

## 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. Aspen is somewhat limited on the property, but is an important type for many species of wildlife. Regeneration harvests should focus on providing new age classes of oak and other early successional species. Scattered pine plantings provide cover for wildlife and offer some aesthetic relief to the hardwood cover types. The pines will be thinned periodically to provide roosting and nesting opportunities. Maintain grass cover types, while minimize any impact to the wetland shrub cover type. Due to the important wetland habitats on the property, all management activities will carefully consider water quality best management practices.

### Forest Management Objectives:

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.
  - d. Promote/retain larger diameter trees.
2. Promote other early successional forest types.
  - a. Promote aspen
  - b. Promote stands of central hardwoods.
3. Maintain pine plantations.
  - a. Promote large crowned trees for wildlife and aesthetics.
4. Maintain grass cover type.
5. All stands.
  - a. Consider planting opportunities for desirable species such as oak.
  - b. Control invasive plant species (e.g., black locust, buckthorn, honeysuckle).

**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):

**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-cuts, group selection 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 located 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 for savanna structure where appropriate by treating undesirable species chemically, mechanically or by fire with the goal of maintaining an oak component on the landscape.

**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



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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.

**ASPEN** – Coppice harvest to regenerate these stands. Stagger the harvest of the remaining mature patches of aspen over the next 5 to 10 years to promote age diversity. Excessively wet soil will be the limiting factor in accessing several of the aspen clones.

**RED and WHITE PINE** – Thin plantations every 8 to 10 years (beginning in 2020). Leave dead and dying pines for cavity and nesting birds and for coarse woody debris.

**UPLAND FIELDS** – Roughly half of acreage is comprised of grasslands or wetlands. Prescribed fire, as well as mechanical and chemical treatment of undesirable species will be used to maintain these areas.

**SHRUB LAYER** – Where appropriate utilize timber harvesting, mechanical and chemical control, or prescribed fire to create a quality shrub transition between grassland and forested habitats.

**WETLANDS** – Wetlands will generally be passively managed except for invasive species control utilizing both mechanical and chemical treatment methods.

Approvals:



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Regional Ecologist Date

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Forester Date

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Property Manager Date

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Area/Team Supervisor Date