



Interim Forest Management Plan

Property Identifiers

Property Name: **Blackhawk Lake Wildlife Area**
(multiple, small properties can be grouped):

Property Designation or Type **Wildlife Area**

DNR Property Code(s) (DNR Prop Code Number)

Forestry Property Code(s):

Property Location - County(ies): **IOWA**

Property Acreage: **2,037**

Master Plan Date: **1985**
(if property has one)

Property Manager: **Travis Anderson**

Property Assessment

The following should be considered during the property assessment:

A. Ecological Landscape description and property context

Blackhawk Lake Wildlife Area is a 2,037 acre property in west-central Iowa County, in parts of Highland and Eden Townships. The property includes the 220 acre Blackhawk Lake, as well as 330 acres of "recreation area" leased to Iowa County. Iowa County operates a camp ground, hiking trails and beach area within these 330 acres. Blackhawk Lake Wildlife Area lies within the Western Coulee and Ridges Ecological Landscape.

The Western Coulee and Ridges Ecological Landscape is the largest of the 16 Ecological Landscapes. It is located in southwestern and west central Wisconsin within the Driftless Area, a region that escaped glaciation during the last glacial period. The Driftless Area is noted for its steeply dissected terrain, extensive network of streams, and lack of glacial deposits (although glacial outwash materials do occur in river valleys). Several large rivers including the Wisconsin, Mississippi, Chippewa, Kickapoo and Black flow through or border this Ecological Landscape.

Historical vegetation consisted of southern hardwood forest, oak savanna, and prairie, along with wetlands (forested and open) along rivers and streams. With Euro-American settlement, most of the level land on ridgetops and in valley bottoms was cleared for agriculture. The untillable steep slopes between valley bottom and ridgetop either remained in forest or grew up into oak-dominated forests when early wildfire-suppression policies were instituted. The early vegetation of Wisconsin was mapped by Robert Finley



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and published in 1976, and was based on notes and maps from the original Public Land Surveys. Finley's map indicates that Blackhawk Lake was dominated by Oak Opening, Surveyors described the terrain as uneven, rolling, and even "exceedingly hilly, "and described the vegetation as thinly timbered. In the central-eastern part of Blackhawk Lake, they even made special note of the absence of undergrowth and grassy areas. All of this information points towards prairie, oak savanna and oak woodland as the dominant cover types.

Current vegetation of the Western Coulee and Ridges Ecological Landscape is a mix of forest (40% of total cover), agriculture, and grassland, with wetlands mostly restricted to the river valleys. The primary forest cover is oak-hickory, while maple-basswood forests are common in cooler, moister areas. Bottomland hardwoods occur in the valley bottoms of major rivers. Relict conifer stands are rare, and are associated with steep-faced outcrops with cool microclimates. This Ecological Landscape has few natural lakes, though oxbows and ponds may be found with large river floodplains. Impoundments have been installed on a number of rivers to create man-made lakes.

General Property History

The Blackhawk Lake Wildlife Area is part of the former Blackhawk Lake Recreation Area. Planning operations for the recreation area began in 1960 when the Iowa County Soil and Water Conservation District applied for assistance from the USDA Soil Conservation Service (SCS) under Watershed Protection and Flood Prevention Act. In 1964, the development of a recreational lake in conjunction with flood retarding dam was added to the plan.

The Otter Creek Watershed Project was approved in 1966. The co-sponsors were the Iowa County Soil and Water Conservation District and the Cobb-Highland Recreation Commission. Funding came from county, state and federal funds. During 1966 and 1969, 2,040 acres were purchased. These lands were deeded to the state as part of the requirements for financial assistance.

The state subsequently conveyed a perpetual easement to the Cobb-Highland Recreation Commission on 430 acres to be developed as an intensive recreation area. The intensive recreation area now includes a 100+ site campground, beach area, concession stand, boat launch and parking area, and nature trail.

B. General property description – management, adjacent land uses, topography, soils, etc.

Blackhawk Lake Wildlife Area is over 2,000 acres, managed primarily for hunting opportunities such as deer, wild turkey, small game, and pheasant. The property is consistent with the Ecological Landscape it lies within; as the topography varies from gently rolling to extremely steep. Wooded uplands comprise approximately 94% of the area, grassy uplands comprise approximately 5%, and wetlands comprise less than 1%. Much of the upland habitat is managed for woodland or savanna species, however the planted prairies/grasslands and remnant prairies are managed to maintain that habitat type. Prescribed fire is a major land management tool for prairie restoration and maintenance, as well as herbicide use and mowing.

Ring-necked pheasants are actively stocked on the property for hunting, and small sunflower fields are established annually to provide opportunities for mourning dove hunting.



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The property lies within the Otter and Morrey Creeks Watershed. The streams in this watershed have a high gradient, and most support trout (or did in the past).

Blackhawk Lake is 220 acres, has a maximum depth of 40 feet, and was created by impounding the headwaters of Otter Creek in 1964 as part of a flood control project. Otter Creek is a tributary to the Wisconsin River. It is a cool-water Class II trout stream for eight miles of its length above Dickinson Creek (Blackhawk Lake not included), and is considered an impaired water. Narveson Creek, a cold-water tributary to Otter Creek, is a spring fed Class II trout fishery, and courses through the northwestern part of the study area. Cave Hollow Creek is a spring-fed, cool-water stream that flows through the southwestern tip of the study area. It has a limestone bedrock bottom as well as limestone bluffs along its banks. Several other unnamed creeks flow into Otter Creek within the study area boundaries.

Most soils in the study area are deep, well-drained silt loams. Limestone and sometimes sandstone bedrock lie close to the surface in scattered locations throughout both sites, however, resulting in shallow soils and exposed bedrock (sometimes in the form of cliffs or outcrops). Alluvial deposits occur along stream and river bottoms, yielding poorly-drained soils.

C. Current forest types, size classes and successional stages

The majority of the forest cover types on Blackhawk Lake are upland associated species and compromise about 60% of the land area. The non-forested areas consist mostly of upland grass, crop land, and the lake.

Forested Cover types total 1221 acres or 59% of total recon acres.

Oak: 676 acres (55% of the forested acres) 9% younger than 65 years, 62% 66-90 yrs old, and 29 % older than 90 years.

Central Hardwoods: 338 acres (27% of the forested acres) 10% younger than 35 years, 37% 60-80 years, 53% older than 80 years. High component of black walnut.

White Pine: 138 acres (11% of the forested acres) Much of the white pine is plantation origin between 30 and 50 years old. Minor acres in Pine Relict

Red Pine: 27 acres (2% of the forested acres) All of the red pine is plantation origin between 30 and 50 years old.

Aspen: 19 acres. Also smaller clones ½-2 acres scattered throughout the property

Other: 23 acres. Different minor cover types some plantation origin.

D. NHI: Endangered, threatened, Special Concern species, Species of Greatest Conservation Need (SGCN)

The Natural Heritage Inventory (NHI) reports 16 elements that occur on or near Blackhawk Lake Wildlife Area. These include 2 species listed as Endangered (Blanchard's cricket frog (*Acris blanchardi*), ornate box turtle (*Terrapene ornata*)), 3 Threatened species (Henslow's sparrow (*Ammodramus henslowii*), Acadian flycatcher (*Empidonax virescens*), big brown bat (*Eptesicus fuscus*)), and 6 species as Special Concern (Blanding's turtle (*Emydoidea blandingii*), Highland dancer (*Argia plana*), lake chubsucker (*Erimyzon sucetta*), pickerel frog (*Lithobates palustris*), silver shub (*Macrhybopsis storeriana*), and prairie fame-flower (*Phemeranthus rugospermus*)). In addition, 3 communities are included with these elements and they are Bat Hibernaculum, Moist Cliff, and Southern Dry-mesic Forest.

17 Species of Greatest Conservation Need (SGCN) were observed at Blackhawk Lake Wildlife Area during a 2011 Biotic Inventory: Acadian flycatcher, Black-billed cuckoo,



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Blue-winged warbler, Bobolink, Brown thrasher, Dickcissel, Eastern meadowlark, Field sparrow, Grasshopper sparrow, Henslow's sparrow, Least flycatcher, Pickerel frog, Red-headed woodpecker, Vesper sparrow, Willow flycatcher, Wood thrush, and Yellow-billed cuckoo (Rapid Ecological Assessment for Yellowstone Lake & Blackhawk Lake Managed Lands, WDNR, 2012).

E. Wildlife Action Plan Conservation Opportunity Areas (COA),

According to the Wisconsin Wildlife Action Plan (WAP) (WDNR 2006a), Blackhawk Lake Wildlife Area lies within the larger "Dodgeville and Wyoming Oak Woodland/Savanna" COA, an opportunity identified as having continental significance.

The WAP identifies 37 natural communities for which there are "Major" or "Important" opportunities for protection, restoration, or management in the Western Coulees & Ridges Ecological Landscapes. Thirteen of these natural communities are present on Blackhawk Lake managed lands and include Southern Dry Forest, Southern Dry-Mesic Forest, Pine relict, Oak Barrens, Shrub Carr, Dry Prairie, Sand Prairie, Surrogate Grasslands, Emergent Marsh, Dry Cliff, Coldwater Stream, Coolwater Stream, and Southern Sedge Meadow.

The WAP also describes Priority Conservation Actions that make effective use of limited resources and address multiple species with each action. Implementing these actions and avoiding activities that may preclude successful implementation of these actions in the future would greatly benefit the SGCN at Blackhawk Lake Wildlife Area. Priority Conservation Actions identified in the Wisconsin Wildlife Action Plan (WDNR 2006b) for the Western Coulees & Ridges Ecological Landscapes that apply to Blackhawk Lake Wildlife Area include:

- Sand prairie and oak barrens restoration and maintenance.
- Grassland bird and wildlife management.
- Restoration and protection of spring-fed cold water streams.
- Preservation of cliff communities, along with cave and bat hibernacula.
- Restoration of rare grassland and oak savanna communities.
- Rare prairie species restoration and management (e.g., Henslow's sparrow, loggerhead shrike, Bell's vireo, prairie bush clover, regal fritillary butterfly, other rare invertebrates, and the Blanchard's cricket frog).
- Protection of pine relicts.

F. Significant cultural or archeological features

A small cemetery is located on the east side of the property, but any proposed management plans for the property will follow NHI and Archeological protocols and reviews.

G. Invasive species

There are a number of nonnative invasive species present at Blackhawk Lake Wildlife Area. Garlic mustard, wild parsnip, Eurasian bush honeysuckle, Russian olive, multiflora rose, common buckthorn and reed canary grass are the most abundant. A small patch of



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Japanese knotweed has been discovered and is being actively controlled. Efforts have been made to control all of these species with herbicide and cutting.

H. Existing State Natural Areas (SNA) designations/natural community types limited in the landscape

Exceptional Characteristics and Opportunities

Rare Animals and Plants. Blackhawk Lake Wildlife Area supports numerous rare species (see section D above). Twenty-four rare animal species have been documented, including 2 State Endangered species, 3 State Threatened species, and 6 Special Concern species. One Special Concern plant species, Prairie Fame-flower, is documented at Blackhawk Lake Wildlife Area.

Grassland Bird Conservation. Since the North American Breeding Bird Survey began in 1966, grassland birds have declined more steeply than any other group of birds in North America and the Midwest. The grasslands of Blackhawk Lake Wildlife Area provide breeding habitat for at least 9 grassland and shrubland bird Species of Greatest Conservation Need.

Oak Savanna Restoration. Oak savannas were historically common in Wisconsin but are now rare throughout the state, thus their restoration is critical to the survival of many rare plants and animals that depend on them. Opportunities exist at Blackhawk Lake Wildlife Area to restore Oak Opening, Oak Woodland, and Oak Barrens within a matrix of other habitats.

Older Forest Conservation. Older forests (greater than 100-120 years old) in Wisconsin are rare and declining, largely due to timber harvesting and conversion to other land uses.

Herptile Conservation. The variety of aquatic, wetland, and upland habitats of Blackhawk Lake Wildlife Area are well-suited to a number of herptile species. The pickerel frog has been documented in association with springs and spring-fed creeks. Blackhawk Lake Wildlife Area the Oak Barrens and Sand Prairie habitats show potential for supporting rare species such as ornate box turtle and nesting Blanding's turtles.

I. Primary public uses (recreation)

Hunting is the primary recreational use of the upland portions of the property. Other uses include trapping, bird watching and hiking, berry and mushroom picking, snowshoeing, and cross country skiing. Fishing is an important use for the lake, as well as on the streams flowing into and out of the property.

J. Biotic Inventory Status

A Rapid Ecological Assessment of the property was completed in June 2012. This document is available on the Department's website <http://dnr.wi.gov/topic/nhi/nhireports.asp> under DNR Publication PUB-ER-834-2012.

K. Deferral/consultation area designations

Draft deferral/consultation area designations have not been identified on the property.



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IFMP components

Management Objectives: (Outline primary forest management objectives):

1. Manage and maintain oak cover types wherever feasible. The oak cover type will slowly and naturally convert to shade tolerant central and northern hardwood species without active management. The creation of younger forest ages classes via timber sales supported with natural and artificial regeneration will attempt to maintain a significant oak component on the landscape. There are a few younger oak plantings that can be maintained for future oak stands.
2. Allow the Central Hardwood type to regenerate naturally, but encourage oak and black walnut in this cover type whenever possible. Use even aged management of the central hardwood type to promote oak and younger age classes.
3. The white pine and red pine plantations should be thinned to rotation age and be converted to hardwoods at the time of regeneration to encourage native species. The areas of stunted red pine will be harvested allowing hardwoods to regenerate. Smaller plantations within larger grass units may be clear cut to facilitate the grass management activities. Pine plantations that fragment blocks of native community habitat and/or prevent larger scale management should be removed and converted to native community cover types.
4. There is not a significant acreage of aspen, but there are many stands with aspen as a component with smaller clones. Maintain aspen stands and clones within larger cover types through coppice regeneration where appropriate, considering habitat context and adjacent stand management.

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)

1. Oak: Plans are to manage the oak resource that is present on the property as long as possible and where feasible. Some areas will convert to more shade tolerant trees without significant efforts to regenerate oak. In the stands where central hardwood conversion is chosen, efforts will be made to plant oak into gaps and patch clear cuts to keep an oak component in these stands. On the site where the sites where oak regeneration can be accomplished without significant investment, even aged management techniques will be used.
2. Central Hardwoods: Maintain the large oak in the central hardwood stands as long as possible. Allow natural regeneration in management, but incorporate 1 to 2 acre patches in timber sales and hand plant and site prep those gaps to 1,000 oak seedlings to the acre.
3. Red and White Pine: Commercially thin the red and white pine plantations to rotation age and allow conversion to hardwoods. Red pine that has stagnated due to unsuitable soils will be salvaged with natural conversion to hardwoods. Pine relict areas will have no forest management performed.
4. Aspen: The aspen will be managed through coppice regeneration.
5. All Stands: The Wildlife Action Plan describes Priority Conservation Actions that make effective use of limited resources and address multiple species with each action. Implementing these actions and avoiding activities that may preclude successful implementation of these actions in the future would greatly benefit SGCNs at Blackhawk Lake. All proposed forestry prescriptions will reference Priority Conservation Actions, Wildlife Action Plan priorities, property objectives and be based on individual stand level needs. In particular, since the property is on the Southwest Grassland and Stream



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Conservation Area, the open areas need to be managed for grassland nesting birds. Existing cropland will be converted to grassland nesting cover. Savannas need to be maintained, and where degraded, restored.

Summary of Public Involvement and Comments Received

Maps (Optional)

- a. Property Boundary and ownership Maps
- b. Forest Cover Type Maps

PREPARED BY:

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2-4-2015
Date

APPROVED:

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2-4-15
Date

REVIEWED BY:

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District Ecologist

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Date