



Interim Forest Management Plan

Plain Honey Creek Watershed – White Mound County Park

Property Identifiers

Property Name and Designation:

PLAIN HONEY CREEK WATERSHED – WHITE MOUND COUNTY PARK

County: **SAUK COUNTY**

Property Acreage: **1,092 acres** (<http://dnr.wi.gov/topic/lands/WildlifeAreas/whitemound.html>)

Forestry Property Code(s): **5710 (WDNR property code 6527)**

Master Plan Date: **None**

Property Assessment

The following should be considered during the property assessment:

GENERAL PROPERTY DESCRIPTION

At almost 1,100 acres, White Mound is Sauk County's largest park. At the center of the park lies the 104 acre White Mound Lake. In 1967 the Department conveyed the land to the Sauk County Soil and Water Conservation District. Sauk County agreed to construct, operate and maintain a multiple-use dam and to develop, operate and maintain a public recreation area. Sauk County Parks and Recreation Department manages the park and campgrounds.

- **LANDSCAPE AND REGIONAL CONTEXT**

White Mound County Park is located in the Western Coulee and Ridges Ecological Landscape (WCREL) and has the following Landtype Associations: 222Lc18 – Hills and Valleys – Wisconsin River Drainage. This landscape is typified by highly eroded, unglaciated topography with steep sided valleys and ridges and high gradient streams with dendritic drainage patterns.

Historical vegetation in this landscape consisted of southern hardwood forests, oak savanna, scattered prairies and floodplain forests and marshes along the major rivers. With Euro-American settlement, most of the land on ridgetops and valley bottoms was cleared of oak savanna, prairie, and level forest for agriculture. The steep slopes between valley bottom and ridgetop, unsuitable for raising crops, grew into oak-dominated forests after the ubiquitous presettlement wildfires were suppressed.

Currently, the WCREL 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.



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- **PROPERTY CONTEXT/LANDSCAPE**

White Mound County Park, though proximate to other significant and designated resources in the region, is not itself located in a Conservation Opportunity Area (COA) as identified within the Wildlife Action Plan's implementation document for the Western Coulee and Ridges Ecological Landscape: http://dnr.wi.gov/topic/WildlifeHabitat/documents/MapCOA_EL11.pdf.

- **HISTORY OF LAND USE AND PAST MANAGEMENT**

White Mound County Park is named for a nearby community that existed in the early settlement of Wisconsin and was named for the numerous lime kilns that had the appearance of white mounds on the landscape. The practice of firing limestone to make lime was highly dependent on the availability of vast amounts of fuel wood. Early land use of the valleys was agricultural fields and the hillsides were heavily deforested for firewood and logs. Charcoal production was an important local industry in Sauk County that consumed a vast amount of hardwoods for its production.

Since acquisition of the property in the late 1960s and completion of the dam in the 1970s, land management has included wildlife shrub plantings on the spoils deposition fields, prescribed burning of grasslands and oak forest, tree planting for reforestation and afforestation, timber stand improvement, aspen regeneration harvest, prairie establishment, and wildlife opening maintenance.

Significant forestry activities include; 7 acres aspen regeneration harvest in 1996, Timber Stand Improvement for 12 acres of oak forest in 2002, 5 acres of oak afforestation in 2009 and the establishment of a 138 acre timber sale in 2010 that includes 9 acres of aspen regeneration and 129 acres of oak forest improvement thinning (note: this timber sale has been sold, but not yet harvested as of 2/2013). The 2010 sale area was under-planted with 25,000 seedlings in 2012.

SITE SPECIFICS

- ***Current Forest Cover (forest types, size classes and successional stages):***

Forested cover types total 688 acres or 63% of total recon acres.

- **Oak** (65% of forested acreage) - 448 acres with 98% over sixty years old; 2% 1-20, 0% 21-40, 0% 41-60, 36% 61-80, 62% in the extended rotation age class of 81-120).
- **Central Hardwoods** (22% of forested acreage) - 154 acres with 151 acres (98%) about 80 years old with a year of origin near 1935.
- **Northern Hardwoods** (5% of forested acreage) - 36 acres with a wide variety of age and sized classes, especially large sawtimber size class.
- **Aspen** (5% of forested acreage) - 33 acres which originated 47 to 72 years ago. Note, there are several younger clones of aspen not large enough to constitute a stand scattered throughout the property.
- **White Pine** (2%) - 17 acres of which 6 acres were planted in 1956 and 11 acres planted in 1966.

Non-forested cover types total 404 acres or 37% of recon total. Of the non-forested acreage, 214 acres (54% of non-forest) are upland grass, 41 acres (10% of non-forest acreage) recreational, 22 acres of true grasses (6% non-forest). 10 acres of farmland (1% non-forested), 10 acres of lowland brush (1% non-forested) and a 103 acres lake (26% non-forested).

- ***Wildlife Action Plan / Species of Greatest Conservation Need:*** White Mound County Park is not specifically mentioned in the WDNR Wildlife Action Plan's Implementation document for the WCREL (<http://dnr.wi.gov/topic/WildlifeHabitat/COA.html>). However, Dry Prairie is found on the property which is listed as a priority natural community type found within the WCREL, and for which several priority species of greatest conservation need are listed.



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- **Conservation Opportunity Area (COA) designations:** The property is not located within a designated Conservation Opportunity Area.
- **Natural Heritage Inventory (NHI) / Rare species:** White Mound County Park is known to support at least one rare species – a protected/special concern reptile. Prior to all future management activities NHI screenings will be conducted for both rare species and natural community types.
- **State Natural Area designations:** There are no SNAs located within the boundaries of White Mound County Park.
- **High Conservation Value Forests (HCVF) or other resources / natural community types limited in the landscape:** No High Value Conservation Forests have been identified for White Mound County Park; however, some natural community types and portions of the property may warrant consideration as candidates for High Conservation Value Forest designation. Oak Forest constitutes 65% of the forested acres at White Mound and has the most potential for providing habitat for associated endangered, threatened, and species of greatest conservation need. Portions of the oak forest were formerly less densely stocked with trees and likely had structure consistent with oak opening and savannas. Opportunities exist at White Mound to convert portions of the oak forest to oak opening and savannas.
- **Biotic Inventory status (see website):** A Biotic Inventory has not been completed for this property.
- **Deferral/consultation area designations:** Draft deferral/consultation area designations have not been identified on the property.
- **Invasive species:** Scattered moderate levels of autumn olive, buckthorn, honeysuckle, and garlic mustard exist throughout the property.
- **Soils:** Soils include Valton and La Farge silt loams and Norden loams on the ridges with Norden and Eleva soils rock outcrops. Valley and low areas are a mix of Ettick, Curran and Jackson silt loams, wet Fluvalents with Palms and Houghton mucks.

CULTURAL AND RECREATIONAL CONSIDERATIONS

- **Cultural and archeological sites (including tribal sites):** According to the Wisconsin Historical Society database, no historic sites are recognized. There is a reconstructed lime kiln on the property that is fenced and has signage, but it is not listed as a historical site. Any known sites would be protected during forest management operations. The state archeologist would be consulted prior to any ground-disturbing activity to prevent disturbance of these sites.
- **Recreational uses:** Recreation use of the property includes camping, swimming beach and picnic areas, horseback riding trails, and walking trails, cross country skiing and snowmobiling. About 220 acres are designated for high use, while the remaining 880 acres allow public hunting and fishing.

Part 2: Future Management

FOREST MANAGEMENT OBJECTIVES (Outline primary forest management objectives):

The primary forest management objective is to provide a large block of older forest for recreation, game species and Species of Greatest Conservation Need associated with older forests. A secondary objective is to provide young forest habitat for both game and non-game species that utilize early successional forests. Management will utilize both non-commercial and commercial (via timber sales) actions.



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- (1) Manage and maintain oak cover types where feasible.
 - a) Diversify age classes.
 - b) Thin appropriate timber stands to achieve larger diameter trees.
 - c) Increase coarse woody debris.
 - d) Crop tree release oak in young stands.
- (2) Manage to emphasize importance of forest interior songbirds and other old forest wildlife species by limiting forest habitat fragmentation and expanding forest block size.
- (3) Manage for early successional forest types.
 - a) Promote aspen where appropriate, assessing the context of each stand. Natural conversion to other hardwoods may be appropriate for interior forest blocks, whereas in other areas aspen regeneration may be favored.
 - b) Promote feathered edge along forested - open land transition.
- (4) Promote northern hardwoods on appropriate sites using uneven-aged management.
- (5) All stands
 - a) Increase large snags and coarse woody debris.
 - b) Control invasive plant species.
 - c) Consider planting opportunities for desirable species such as oak.
- (6) With all forest management objectives, there are several more universal objectives that can be attained including increasing large snags and coarse woody debris, controlling the spread of invasive plant species and consideration for Wildlife Action Plan priorities and management of SGCNs.

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** - Extend even-aged rotation age constraints to 120 years to lengthen oak harvest schedule. Maintain and promote oak through planting, timber stand improvement methods, prescribed fire, thinning, seed tree, shelterwood, group selection, coppice, and other techniques described in the DNR Silviculture and Forest Aesthetics Handbook. Promote the growth and retention of large oaks through techniques such as thinning, extended rotation, and managed old forest/old growth. Consider prescribed burning as a site preparation technique to foster oak regeneration.

Prioritize regeneration harvests on south and west facing slopes where oak regeneration success is greater, including some of the mid-age stands in order to diversify oak age classes. Pursue a regulated distribution of oak stands through even-aged regeneration on south, east and west slopes (60% of current oak forest) with the highest potential for oak regeneration. The long-term regeneration goal is 2.25 acres per year (compounded to 27 acres every 12 years or 6.75 acres every third year). Evaluate and conduct interim even-aged thinning every 12 years on southerly exposed slopes to densities consistent with DNR Silvicultural Handbook even-aged management

For the remaining component (40%) of the oak forest on north facing slopes, concentrate on retaining oak as a significant portion of the future forest while allowing natural conversion to Northern Hardwoods. Evaluate and thin every 12 years to naturally convert to Northern Hardwoods through uneven-aged management with an emphasis on retaining the oak component.

- (2) **ASPEN** - A priority is the regeneration of small stands of aspen scattered throughout the landscape, where appropriate, to improve habitat for ruffed grouse and other game species. Where appropriate, create stratified groupings aspens to provide an even amount of habitat in the sapling, pole and Sawtimber size classes.



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- (3) **CENTRAL HARDWOODS** – Manage utilizing both even and uneven-aged silvicultural methods such as thinning, seed tree, shelterwood, clearcut, timber stand improvement methods, and other techniques described in the DNR Silviculture and Forest Aesthetics Handbook to regenerate these stands. Utilize even-aged methods along the forest-open land transition, retaining some mast trees, especially oak, as groups or individuals to meet legacy tree and green tree requirements and to develop large snag/cavity trees. This will also promote quality feathered edge habitat. Primarily utilize uneven-aged harvest methods to develop large diameter trees and maintain forest canopy. Promote a diversity of tree species beneficial to wildlife such as oaks, walnut, black cherry, hickory, basswood, sugar maple, and others.
- (4) **NORTHERN HARDWOODS** - Promote the growth and retention of large trees through techniques such as thinning, extended rotation, and managed old forest/old growth. Consider following the DNR Old Growth and Old Forest Handbook Management Guidelines for management of these stands.
- (5) **WHITE PINE** – Thin White Pine plantations per DNR Silvicultural Handbook and continue even-aged management.
- (6) **UPLAND FIELDS** – There are approximately 224 acres of upland fields. Annually examine 10 acres for afforestation potential to create larger interior forest blocks. Natural succession could be used as an alternative where desirable tree seed sources are present.
- (7) **GRASSLANDS** – Cool and warm-season grasslands will be maintained via prescribed fire, mechanical, and chemical control of unwanted species. Consider afforestation of some cool-season grassland sites to provide greater forest connectivity.
- (8) **INVASIVE SPECIES** – Identify invasive plant species and implement control practices such as prescribed fire, hand pulling, chemical and mechanical control to eliminate or reduce negative impacts.
- (9) **ALL STANDS** - Retain reserve/legacy trees as groups or individuals throughout the property within harvested stands. Adhere to Best Management Practices in all management activities. Additionally, 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 on the property. All proposed forestry prescriptions should reference Priority Conservation Actions, Wildlife Action Plan priorities, property objectives, where applicable, and be based on individual stand level needs.

APPROVALS:

	3/27/2013
District Ecologist	Date
	12/10/2013
Forester	Date
	12/6/2013
Property Manager	Date
	12-10-13
Area/Team Supervisor	Date