Sauk Prairie Recreation Area

Draft Master Plan & Environmental Impact Statement
August, 2015

Wisconsin Department of Natural Resources
Bureau of Parks & Recreation
Figure 1: Conceptual map of the future Sauk Prairie Recreation Area.
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Cover photo by Thomas Meyer
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All Department of Natural Resources properties are required to be covered by a Master Plan describing the scope, purpose and management of the project. This Master Plan complies with NR 44, Wis. Adm. Code - Master Planning for Department Properties.
Acronyms

BAAP .................... Badger Army Ammunition Plant\(^1\)
BHG ..................... Badger History Group
BIG ..................... Badger Intergovernmental Group
BOMC .................... Badger Oversight and Management Commission
BOW ..................... Badger Ordnance Works, the original name of the complex
BRC ..................... Badger Reuse Committee
BVSD .................... Bluffview Sanitary District
DATCP .................. Wisconsin Department of Agriculture, Trade, and Consumer Protection
DFRC .................... Dairy Forage Research Center
DLSP ..................... Devil’s Lake State Park
DOA ..................... Wisconsin Department of Administration
DOT ..................... Wisconsin Department of Transportation
DNR ..................... Wisconsin Department of Natural Resources
FLP ..................... Federal Lands to Parks program
GSA ..................... General Services Administration
GST ..................... Great Sauk Trail
HCN ..................... Ho-Chunk Nation
NPS ..................... National Park Service
NRB ..................... Natural Resources Board
PDMD .................... Power driven mobility devices
RPA ..................... Regional and Property Analysis
SCORP .................. Statewide Comprehensive Outdoor Recreation Plan
SPRA .................... Sauk Prairie Recreation Area
USDA .................. United States Department of Agriculture
USH, STH, CTH ...... United States Highway, State Highway, County Highway
WAP ..................... Wildlife Action Plan

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\(^1\) Badger Army Ammunition Plant is sometimes referenced as BAAAP, which follows Army protocol of using the first two letters of a place’s first word in acronyms.
Definitions

Native, surrogate, and degraded

The existing habitats at SPRA are in a wide variety of conditions. Although the term “surrogate” is most often associated with grasslands, in this master plan the terms “native,” “surrogate,” and “degraded” apply to all habitat types and are defined as follows:

Native
Native habitats are those dominated by native plant species and that are able to maintain functioning ecological processes (e.g., fire, nutrient cycling, species interactions). These can be either areas of remnant, unplowed sod or restorations using local genotypes of a reasonably wide diversity of native grasses, forbs, and (for savannas and forests) shrubs and trees. When in large tracts, native lands typically provide important habitat for native vertebrates. Remnant and unplowed areas, even if only small sites, often harbor a diversity of native invertebrates. An example of a native habitat at SPRA is the Hillside Prairie.

Surrogate
Surrogate habitats are those dominated by non-native plant species or a mix of native and non-native plants that meet some life history needs of native animals. These areas may be of limited ecological value as native communities, but when in large blocks (e.g., for grasslands about 80 acres, or smaller if contiguous with other open habitats) they typically provide habitat structure that supports many native animals (notably birds), including several with high conservation need. Converting these lands to native habitats often requires planting and other intensive management techniques. Examples of surrogate habitat at SPRA are: (1) the grasslands in the Rocket Area, (2) the former pasture in the Magazine Area with non-native grasses and scattered cottonwood trees that mimic native savanna and (3) the former agricultural lands in the Northeast Moraine that have succeed to dense stands of early successional trees and exotic shrubs.

Degraded
Degraded habitats are those that retain some of the species or characteristics of native habitats, but which may have an altered species composition (including invasive species) or structure, or have reduced ecological function. They may or may not support most native animals based on their condition. Restoration of these areas depends greatly on the habitat and type of degradation; a degraded oak savanna with good structure might require management actions such as fire or thinning, while an extensive thicket of invasive shrubs might need more intensive techniques like clearing and replanting. Degraded sites must each be evaluated independently for the type of management needed to restore them to a more desirable condition. An example of a degraded habitat at SPRA is an overgrown oak opening in the Magazine Area that has many large, open-grown oak trees in a forest of younger trees.

Grassland to forest continuum

Since naturalists first started exploring the state, different terms have been used to characterize Wisconsin’s landscape. The following terms are defined here to clarify the continuum of habitats found at SPRA.

Grasslands
In this master plan, grasslands are defined as open areas largely without trees and dominated by a wide range of grasses and forbs. Although grasslands have an open aspect, portions may have up to 25% shrub or woody cover. Many of the grasslands at SPRA have been highly disturbed and have a significant invasive species component. Indeed, in many portions of SPRA there are few, if any, native grasses and forbs present.
Oak savanna, oak opening, and oak woodland

The term “savanna” has never been well defined. In the Midwest, savanna is generally used to describe an ecosystem that was historically part of a larger complex bordered by the prairies of the west and the deciduous forests of the east. The savanna complex was a mosaic of plant community types that represented a continuum from prairie to forest. Savannas were the communities in the middle of this continuum. The mosaic was maintained by frequent fires and possibly by large ungulates such as elk. Oaks were the dominant trees, hence the oft-used term “oak savanna” to describe this general habitat type.

Because savannas grade into both prairie and forest, there are no clear dividing lines between it and these two communities. The Department includes three habitats (native plant communities) under the “oak savanna” umbrella, two of which occur at SPRA: oak openings and oak woodlands. Oak barrens, which occur on sand soils, are a third type of oak savanna, but historically did not occur on SPRA.

In this master plan, oak openings are defined as areas with scattered trees mixed with patches of grassland openings as well as small groves of more densely growing trees. Overall, between 10 and 50% tree canopy exists. In high quality examples, bur, white, and black oaks are dominant in mature stands as large, open-grown trees with distinctive widespread limb architecture. Shagbark hickory is sometimes present. American hazelnut is a common native shrub. The herb layer is typically a mix of those found in oak forests and prairies along with several savanna specialists.

Oak woodlands are defined as areas with more than 50% tree canopy but less than 95%. As with oak openings, there is often a diversity of tree density – small patches of open areas and dense groves of trees may be scattered through oak woodlands. In high quality examples, dominant trees included white, bur, and black oaks, sometimes mixed with red oak and shagbark hickory. Under a characteristic fire regime, shrub and sapling representation in oak woodlands would be minimal. The herb layer is potentially diverse, including some members of the prairie, oak opening, and oak forest communities, but also featuring grasses, legumes, composites and other forbs that are best adapted to light conditions of high filtered shade.

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2 American Bison occurred in the area prior to Euro-American settlement, but were not present in the large herds common in the Plains.
Forest
In this master plan, forests are defined as areas with 75 to 100% tree cover. At SPRA, forests are mostly early to mid-successional in nature and most originated after 1942. Dominant trees include oaks, elms, cherry, box elder, cottonwood, and maples.

Figure 2 shows a generalized representation of the continuum from grasslands to oak openings to oak woodlands to forests and the structural overlap that occurs across these habitats.

Species of Greatest Conservation Need
Species of Greatest Conservation Need (SGCN) have low and/or declining populations that are in need of conservation action. They include various birds, fish, mammals, reptiles, amphibians and invertebrates (e.g., dragonflies, butterflies and freshwater mussels) that are:
- already listed as threatened or endangered;
- at risk because of threats to their life history needs or their habitats;
- stable in number in Wisconsin, but declining in adjacent states or nationally; or
- of unknown status in Wisconsin and suspected to be vulnerable.

SGCNs were identified in Wisconsin’s Wildlife Action Plan (WAP), a strategic approach to wildlife conservation that outlines priority conservation actions to protect species and their habitats. The plan encourages the involvement of all agencies, organizations, and private individuals in taking action to prevent wildlife from becoming endangered and offers a proactive way to conserve wildlife and natural places for future generations.

Facilities
In this document, the term “facilities” encompasses the broad range of structures and man-made features on the property. These include such things as buildings, picnic areas, roads, trails, parking lots, kiosks, and shelters.

Mountain biking, recreational biking, off-road biking trails
Different types of biking opportunities are proposed at SPRA. These are defined as:

Mountain biking = biking on narrow, often curving “single-track” trails that generally use native soils and incorporate naturally occurring materials (rocks, logs) into their design. Mountain biking can be physically difficult with potential for falls and requires bikes specifically built for such use (e.g., wider tires, sturdy frames, short turning radius). Generally speaking, riders cover up to 10 miles in a half-day outing.

Recreational biking = biking on trails surfaced with compacted aggregate or asphalt. Recreational biking, sometimes referred to as “family friendly” biking, can be done using traditional road bikes as well as hybrid bikes. Recreational bike trails are generally designed to be ridden by people with a wide range of abilities, including children. Depending on the surface, adult riders generally cover about 15 to 25 miles in a half-day outing.

Off-road trails = bike trails that are not shared by motor vehicles. All mountain biking trails are “off-road” trails.

Parts of the property
SPRA is comprised of two contiguous blocks of land. In this document, the phrase “main part of the property” refers to all of SPRA except for the Magazine Area.
Figure 3: View looking south from the overlook at the reservoir site. The Northeast Moraine and the Rocket Area are seen in the middle of the photo, while hills on the southeast side of the Wisconsin River are seen in the distance.