CHAPTER III: BACKGROUND AND SUPPORTING INFORMATION

This chapter briefly summarizes the past and current conditions of Sauk Prairie State Recreation Area. Much of the material for this chapter is taken from the Regional & Property Analysis, Sauk Prairie Recreation Area (DNR Pub LF-063). Rather than restate the information in the Regional and Property Analysis (RPA) here, readers interested in additional details about the property are encouraged to review that document. It may be viewed on the web at dnr.wi.gov (keyword “Sauk Prairie Recreation Area” then open the Documents tab).

A. Findings and conclusions of the Regional & Property Analysis
The Regional & Property Analysis describes a wide range of aspects and attributes of both SPSRA and the broader landscape within which it sits. The document culminates in a series of findings and conclusions that set the stage for this master plan. They are summarized here:

- The property offers a significant opportunity to manage a landscape scale surrogate grassland habitat.
- A mosaic of grassland, shrubland, and savanna habitats could be established to meet the needs of many animal species.
- The bluffs at the north end of the property are part of the extensive Baraboo Hills and offer opportunities for coordinated management of oak woodland and glade restoration.
- Grassland and shrubland birds, a group of species of critical conservation need in Wisconsin, would benefit from a diversity of grassland habitat in large, unfragmented tracts.
- Currently the high level of shrub and tree encroachment in the grasslands of SPSRA threatens the diverse grassland bird community.
- Streams and ponds are rare at this site and provide water resources and wetlands that connect the forested Baraboo bluffs with the grasslands and prairies.
- Thirty-three rare animal species have been recorded at the BAAP property, including four State Threatened and 29 Special Concern species. Seven rare plant species are known from the BAAP, including two State Endangered (one is also Federally Threatened) and five State Threatened species.
- SPSRA provides habitat along the Lower Wisconsin River migratory corridor.
- Storage bunkers at the BAAP can provide a unique research opportunity to aid in the conservation and recovery actions for bat populations suffering from White-Nose Syndrome.
- Two ecologically important sites were identified on SPSRA and warrant high protection and/or restoration consideration:
  - Sauk Prairie Recreation Area Baraboo Hills Woodland
  - Sauk Prairie Recreation Area Prairie and Savanna
- In the development of recreation plans, SPSRA should be considered in the larger context of the Baraboo Hills/Devil’s Lake recreation landscape.
- SPSRA is readily accessible to many residents.
- Both motor and non-motorized trail networks should be considered in the master plan. A number of trail opportunities are lacking within the Baraboo Hills/Devil’s Lake recreation landscape that may be met here.
- Access to Lake Wisconsin should be considered.
• Hunting and trapping should be considered for the property in the future. Additionally, limited/controlled hunts could be considered as this would offer a unique experience in the region.

• A number of non-traditional outdoor recreation uses should be considered for inclusion in the master plan. With the large open spaces available at SPSRA, the potential exists to fill out the Baraboo Hills/Devil’s Lake recreation landscape with potential uses such as 112rocketry, shooting ranges, geocaching, dog parks, paintball, community gardens and other recreation activities not typically found on department lands.

• The best overall functional role for SPSRA is to fulfill the highlighted ecological opportunities available while maximizing compatible recreation opportunities. This approach also takes into consideration the nine key values identified in the Badger Reuse Plan, approved by the Sauk County Board in 2001.

Although some conditions have changed over the last three years, these findings and conclusions remain relevant.

B. History of the site

Soon after the last glacier receded from the area some 15,000 years ago, people arrived, as evidenced by occupation in the nearby Raddatz Rockshelter. The Mound Builders built over 300 mounds in the Sauk Prairie area about 1,000 years ago, some of which remain today. For thousands of years, successive populations of Native Americans called the area home, no doubt drawn by the fertile prairies, wooded hills and the Wisconsin River. At different times, the general area was occupied by Muscoutin, Kickapoo, Ho-Chunk, Sauk and Fox tribes. Sauk and Ho-Chunk populations were described by European explorers Marquette, Joliet, and Carver in the 17th and 18th centuries. The Native Americans were forced out of the area through a series of armed conflicts, federal directives, and treaties.

By the 1830s, European immigrant families were settling on the Sauk Prairie. Over the ensuing decades they built a durable and prosperous farming community. Farms were typical of those in southern Wisconsin; lands were devoted to growing a variety of crops including wheat, corn, small grains and hay. Cows, hogs, and chickens were raised along with work horses. Nearly all farms had pastures. Most farms were between 40 and 160 acres. Early photos show a largely treeless landscape on most of the land that would become the BAAP property.

In 1941-1942, after over 100 years of Euro-American settlement, the federal government forced out the landowners and took possession of 10,000 acres north of the village of Prairie du Sac. Although the Badger plant was intermittently active over its lifetime, it ceased operations for good in 1975 and the U.S. Army declared the facility excess to its needs in 1997. The federal government, through its real estate and property arm, the U.S. General Services Administration (GSA), initiated a process to dispose of the Badger property. A contentious debate over Badger’s future ensued, with calls to reestablish an industrial manufacturing center competing with pleas to return the land to its original inhabitants and owners.

The former BAAP property has a number of story lines highlighting its significance including the complex geological history given its juncture at three major landforms, the human history of Native Americans, Euro-Americans, and the construction and operation of the Badger Ordnance Works, and the process of salvage and reuse.

C. History of the Badger Army Ammunition Plant and Sauk Prairie State Recreation Area

The Badger Ordnance Works, later renamed the Badger Army Ammunition Plant, occupied approximately 10,500 acres on the open plain extending south from the Baraboo Range. At great hardship, more than 80 farm families were

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32 About 3,000 acres that were considered surplus to the plant’s function were sold in 1946, mostly to returning veterans.
forced to abandon their homes and land within a few months’ time. Following the nation’s entry into World War II, the Badger Plant was constructed in 1942 to produce smokeless gunpowder and solid rocket propellant. The plant provided material for the duration of the war effort, and was again operational during the Korean and Vietnam conflicts. At its peak use, BAAP contained 1,400 buildings, over 150 miles of roads and 60 miles of rail, and countless miles of steam, water and power lines. At the height of its activity, Badger employed over 10,000 people and remained a major employment center for Sauk County for decades.

The plant had been in standby (idle) status since 1975. In late 1997, the U.S. Department of Defense determined that the BAAP facility was no longer needed to meet the nation’s defense needs and began the decommissioning process. Subsequent efforts to define a future for the Badger property proved challenging due to the site’s unusually rich natural and cultural history, environmental issues, the wide range of potential reuse options, and the complexity of local, state, national, and tribal interests involved.

In early 2000, the Sauk County Board of Supervisors acted to establish a locally-driven planning process to identify reuse options. With the assistance of then U.S. Congresswoman (now Senator) Tammy Baldwin and funds provided by the U.S. Department of Labor, the Badger Reuse Committee (BRC) was convened. The 21-member BRC included representatives from neighboring communities, local, state, and federal governments, and the Ho-Chunk Nation. In its mission statement, the BRC charged itself with the task of developing “a common vision for the reuse of the Badger property that can be meaningfully considered and realistically implemented by the appropriate local, state, and federal agencies.”

The results of BRC’s considerable deliberations are documented in the Final Report on the work of the Badger Reuse Committee, which was endorsed by committee members and the Sauk County Board in May 2001. Early BRC meetings were devoted to gathering and reviewing basic information about the Badger property and its role – past, present, and future – in Sauk County’s landscape, community and economy. Based on this information, the BRC defined nine key values to guide consideration of future uses (see Section D). The committee’s final report was agreed to by all parties and serves as the primary guidance document for planning future uses and management. The complete report and related information about the BRC can be found at: http://www.co.sauk.wi.us (search “Badger Reuse Plan”).

In September 2001, the Badger Intergovernmental Group (BIG) convened to work out ownership agreements with General Services Administration (GSA) for the BAAP property. The BIG included representatives from the department, GSA, DOA, Governor’s Office, Ho-Chunk Nation, USDA Dairy Forage Research Center, Towns of Sumpter and Merrimac, Sauk County, and the U.S. Army. This GSA-led group of future landowners and local government officials focused on parcel footprints and future planning and operations. As a result of these meetings, an agreement was reached that BAAP would be primarily owned by three parties: Ho-Chunk Nation, USDA-DFRC, and the department. Bluffview Sanitary District, DOT and Town of Sumpter are also landowners of the former BAAP.

When the future ownership arrangement was developed, the partners initially evaluated the property using the U.S. Army’s system of parcel boundaries. Most of these parcels were labeled (e.g., “V3”) and named (e.g., “East Rocket Press Houses”). Parcel boundaries were often drawn down the middle of roads. As a consequence, given the somewhat convoluted collections of parcels transferred to the different partners, in many instances the landowners own to the median of boundary roads, but have joint access to the whole road.

In December 2002, the Natural Resources Board approved establishing Sauk Prairie State Recreation Area with a department acreage goal of 3,800 acres. In 2004, the department applied to the National Park Service (NPS) under the Federal Lands to Parks program (FLP) to obtain lands at BAAP for public park and recreation use. In the document outlining the terms and conditions of transfer, the department described its general intentions for future use and management (“program of utilization”). To date, NPS has received title to 3,051 acres from GSA and conveyed them to department.
D. Property features and attributes

As stated before, the SPSRA and the broader BAAP property have a number of important, unique, and interesting natural and cultural features and attributes. These resources have been described in great detail in other documents and publications, many of which are listed in Appendix 2. In particular, the 2000 summary report to the Badger Reuse Committee, *Natural, Historical and Cultural Resources at the Badger Army Ammunition Plant, Sauk County, Wisconsin*, provides an excellent overview. This section largely reiterates information in that document.

1. ECOLOGICAL FEATURES AND ATTRIBUTES

Ecologically, the SPSRA property can play a pivotal role in the regional conservation of grasslands and savannas. Of note here are two opportunities: (a) managing lands as part of an ecological continuum of habitats from the forests in Devil’s Lake State Park to oak woodland to open grassland, and (b) managing large blocks of grassland and oak opening habitats.

Although most of the BAAP has been dramatically altered, some pockets of important high quality habitats remain. In addition, a number of rare species are able to use the “surrogate” habitats that exist. Inventories and surveys of the BAAP over the years have found a number of rare and declining plants and animals. A list of rare plants and animals that have been recorded at SPSRA, their legal status, their current and anticipated population trends, and the expected impact of the implementation of this master plan on the population in the area is provided in Appendix 4.

a. Habitats and plants

Remnants of the following native habitats remain on the SPSRA: bedrock glade in the Bluff Vista west of the reservoirs; dry and dry-mesic prairie along the southwestern perimeter fence and at the Hillside Prairie site in the Magazine Area; oak savanna in the Magazine Area and the Northeast Moraine; and pine relict, southern dry forest and southern dry-mesic forest in the Bluff Vista. All of these sites are small but have the potential to form the focal points to larger restoration efforts.

Some rare plants have been found on the SPSRA (Appendix 4), including the federally-threatened prairie bush clover and the state-threatened woolly milkweed. Unfortunately, neither species has been found recently despite repeated attempts to relocate the populations. It is likely both have been extirpated from the property.

b. Animals

Limited inventories have been completed for invertebrates, amphibians, reptiles and mammals at the former BAAP property. The most complete inventory was conducted by The Nature Conservancy in 1993, which found many of the grassland, savanna, and woodland species common to southern Wisconsin. Notable species from these groups that have been located at BAAP include Cope’s gray treefrog, prairie deermouse, prairie vole, and the population of neotenic salamanders in the east reservoir. Rare and declining animals recorded at SPSRA are listed in Appendix 4.

The category of animals that has been well inventoried at the former BAAP property is birds. The BAAP, including large portions of SPSRA, harbor important populations of many grassland and savanna birds. In addition to the 1993 survey work, comprehensive inventories of breeding birds at BAAP were conducted in 1998, with a follow-up survey in 2012. The 1998 survey located large populations of bobolink, dickcissel, Eastern and Western meadowlarks, clay-colored sparrow, upland sandpiper, red-headed woodpecker, and Bell’s vireo. The later survey found many of the same species, but the populations of some had decreased due to loss of habitat (e.g., utility poles used by red-headed woodpeckers had been removed) or degradation of habitat that has occurred since the
cessation of grazing and as invasive shrubs have infested more areas (e.g., Eastern meadowlark and upland sandpiper).

Despite the property’s ecological challenges, the SPSRA is unquestionably an important bird site and comprises one of southern Wisconsin’s best opportunities to restore large blocks of grassland and savanna habitat. In reflection of its value to birds, the former BAAP property was selected as one of Wisconsin’s Important Bird Areas by the Wisconsin Bird Conservation Initiative and the National Audubon Society.33

2. GEOLOGIC FEATURES AND ATTRIBUTES

   The complex geological history here largely determined the pattern of soils and native vegetation that developed at the property, and influenced Native and Euro-American uses of the land and the layout of the propellant plant. The juxtaposition of the ancient Baraboo Hills, the terminal moraine of the last ice sheet and its outwash plain provide an opportunity to show visitors many geologic stories and to relate the property’s geologic past to its natural and human history. The following list highlights some of the interpretive opportunities at SPSRA:

   - Precambrian quartzite outcrops west of reservoirs.
   - Cambrian shoreline features at reservoirs, including the inclusion of large weathered quartzite boulders within sandstone that was laid down when the region was covered by a large inland sea.
   - Terminal moraine and ground moraine, covering eastern half of SPSRA.
   - Glacial outwash plain - small amount in the Northeast Moraine (most of the outwash plain is on HCN land).
   - Periglacial features.
   - Juxtaposition and interrelationships of landforms, on-site and in surrounding landscape.
   - Influence of geology on natural and human history:
     - Influence on native vegetation (glades and oak woodland on quartzite, short- to mid-grass prairie and savanna on moraine, tallgrass prairie on outwash plain)
     - Influence on human use of the site (e.g., farming, locations of different parts of the BAAP).

3. CULTURAL AND HUMAN HISTORY FEATURES AND ATTRIBUTES

   Although SPSRA has many ecological and geologic features to showcase, what sets the property apart from others in the department’s portfolio, are the stories about its human and cultural history.

   Sauk, Ho-Chunk, and earlier Native Americans tribes lived, hunted, gathered, and made ceremonial use of this area for thousands of years prior to the arrival of Euro-American settlers. The Ho-Chunk ceded their land in 1837, which was followed by settlement by Euro-Americans. The early white settlers turned the prairie and savanna into productive farmland. Succeeding generations continued this tradition, as farming practices progressed. In 1941, the federal government announced plans to build a $63 million “powder plant,” what became known as the Badger Ordnance Works.

   The plant was the single largest and most visible expression of Wisconsin’s contribution to the WWII, Korea and Vietnam war efforts. It offers opportunities to show and describe stories related to workers’ lives in the facility, how the plant operated and its impact on the surrounding residents and businesses, the use and impact of the materials produced here, and the eventual closure and deconstruction of the facility.

33 For more information about the 91 Important Bird Areas in Wisconsin, see http://www.wisconsinbirds.org/iba/.
E. **Elements that guided and influenced the development of the proposed master plan**

Given the unique history of the property, a number of policies, issues, plans, agreements, and circumstances guided the development of this plan and will continue to influence future recreational uses and habitat management actions that can feasibly be implemented.

1. **NATURAL RESOURCE BOARD AND DEPARTMENT POLICIES**

   The Wisconsin Natural Resources Board (NRB) sets policy for the Department of Natural Resources and exercises authority and responsibility in accordance with governing state laws. NRB policies are described in NR 1, Wis. Adm. Code and address property management, fish and wildlife management, forestry and fire control, land acquisition, master planning, and many other issues.

   Two issues of particular public interest at SPSRA, motorized use and a shooting range, have been the focus of recent NRB deliberations. The NRB has requested the department evaluate potential opportunities to provide both motorized recreation areas and shooting ranges on its properties, particularly in the southern part of the state.

   **a. Motorized recreation areas**

   In January 2009, the department presented to the Natural Resources Board a concept plan for funding, locating, and managing a motorized recreation area (MRA) in the state. Part of the plan described the preferences for selecting an area for a MRA, which included:

   - Proximity to a major metropolitan area
   - Large parcel
   - Acquisition affordability
   - Lack of environmental issues or species of conservation concern
   - Limited or no conflicts with adjacent neighbors
   - Areas where there is a demonstrated demand for motorized recreation and community support
   - Land that has limited timber or agricultural production potential

   The NRB did not make any official decisions at the January 2009 meeting, but concurred with the department’s approach and proposal. The NRB deferred making any decisions until the department brought forward a specific proposal for a motorized recreation area.

   **b. Shooting ranges**

   In May 2014, the NRB endorsed the department’s approach to provide additional public shooting opportunities, especially near population centers in the southern and eastern part of the state. The NRB approved the goal of providing public shooting opportunities within 30 miles of most residents and to consider need, amount of public support, cost, hunter education opportunities, and siting constraints in identifying appropriate locations.

   The department recently went through a process to identify a location for a new public shooting range in Columbia County. In that process, the department developed the following criteria to evaluate its properties as potential sites:

   - Minimize the number of residences within the 1,000 yard buffer.
   - Avoid wetlands or hydric soils or soils with hydric inclusions.
2. Avoid State Natural Areas.
2. Avoid archeological sites.
2. Pursue direct road access, preferably located adjacent to major highways or roads.
2. Minimize impact on other recreational users.
2. Minimize impact on blocks of wildlife habitat.
2. Pursue areas where topography is supportive of developing a shooting range.

Department staff identified seven sites on state properties that met the established criteria. An ad-hoc citizen work group was then formed to study the potential sites with the goal of recommending a preferred site for a new range to the department. The three towns with potential sites were each invited to select a member to represent their town, as were the Columbia County Board, the Columbia County Sporting Alliance, the Columbia County Conservation Congress, local business and other conservation organizations.

The ad-hoc group worked through a process to develop additional evaluation criteria and ultimately narrowed the seven sites to two potential locations, Dekorra Wildlife Area and Mud Lake Wildlife Area. The department then implemented a public input process to obtain citizen feedback on the two sites. Public input was gathered by department staff attending town board meetings in each town, hosting an open house in Portage to answer questions and posting an online survey which collected feedback for 30 days. All of the comments and information provided was summarized and distributed to the ad-hoc committee for review. The ad-hoc committee recommended Mud Lake Wildlife Area as their top recommendation.

2. BADGER REUSE PLAN

The Badger Reuse Committee was an independent advisory group whose members came from a cross section of community interests. The committee sought to identify recommendations for future reuse of the property for which there was consensus. To this end, the committee adopted nine key values to guide future use of the Badger property (see sidebar). More detailed criteria, by which reuse ideas and proposals could be evaluated, were developed and nested within the nine values. The committee heard 25 proposals for future uses; ecological conservation, industrial and commercial development, agricultural research, firearms training, recreation, landfill, and prison inmate housing and training were among the topics for future uses that were suggested. The committee also evaluated potential future ownership scenarios.

The committee’s final report, issued in 2001 and commonly referred to as the Badger Reuse Plan, outlined a vision for the reuse of the BAAP property that sought to “promote an appreciation of the Sauk Prairie landscape
through the education, restoration, research, recreation, agriculture and other activities.” In addition to the values and criteria, the committee also developed a conceptual map of future use.

The Reuse Plan is a visionary document – both in the sense that it describes the participants’ common set of values and themes to guide future uses of the property as well as in the sense that it was a pioneering effort by a collection of partners to craft a conceptual future for a property with a rich, troubled, and complex history. To quote from the report’s summary (page 4),

In the past, the Badger lands have too often been a place of division, pain, and conflict. It is the hope of the committee that all members of our community may now contribute to a new beginning at Badger, one that honors the past while serving future generations.

Although the Reuse Plan is not a legally binding document and is now nearly fifteen years old, the department believes it remains a central guidance document for the development of the SPSRA master plan and ongoing use and management of the property.

3. FEDERAL LANDS TO PARKS PROGRAM

In 2004 the department submitted an application to the National Park Service to receive the SPSRA property through the Federal Lands to Parks (FLP) program. As part of the application (in the program of utilization) the department provided a general description of intended future uses of the property, including prairie and savanna restoration and low-impact recreation. It also noted that more specific details regarding habitat management and recreational uses would be developed during the development of the master plan.

Lands conveyed under the FLP must be used for public park purposes in perpetuity and cannot be sold or leased without NPS approval. In the Acceptance of Terms in the FLP application, the department agreed that the property shall revert back to the NPS/GSA if there is a breach of conditions or covenants; that is, if the property is used or managed in a manner inconsistent with the application, or any amendments, approved by the NPS.

Not surprisingly, over the ensuing decade since the department submitted the FLP application and the program of utilization, a number of issues and conditions have changed. For example, in 2004 it appeared that the department would be responsible for many buildings that were slated to remain on the property after transfer; this turned out not to be the case because the U.S. Army removed nearly all the buildings. Another example is that the application states that the department will prepare a master plan for the entire 7,354-acre BAAP property and that issues common to all three primary partners (HCN, DFRC, and DNR) will be handled in a manner that does not adversely impact the other partners. Although all partners agree on the need to coordinate planning and ensure that their respective uses have minimal impact on each other, it is now clear that each landowner needs to prepare a management plan for their property that meets their respective legal requirements and administrative needs. Together, these plans provide an overall plan for the former BAAP property.

The department and NPS both recognized that each would need to remain flexible going forward and the FLP agreement states that the program of utilization may be amended as needed, if agreed to by both the department and NPS.

4. RESTRICTIONS AND REQUIREMENTS RELATED TO THE PROPERTY DEEDS

The SPSRA property has been transferred from the National Park Service to the department in a series of deeds that stipulate several conditions related to future use of the parcels. The primary restrictions and requirements are summarized here:

- Reasonable public access to the Thoelke Cemetery from a public road must be provided. No buildings or other structures may be constructed within 90’ of the cemetery.
• The property is subject to an easement for railroad use (see below).

• The property is subject to easements for electric, gas, telephone, water and sewer utilities.

• The roads whose centerlines represent boundaries between landowners are open for use by both landowners (see below).

• The U.S. Army retains the right to enter the property for any purpose as long as it owns any portion of the former BAAP or to address any remedial, corrective, monitoring, testing or response action needed. As long as the U.S. Army is responsible for the operation and maintenance of the landfills on the property, the U.S. Army also retains the right to excavate and remove clay from any portion of the property that is needed to address landfill management issues.

• The property shall be used and maintained exclusively for public park or recreation purposes in perpetuity as set forth in the program of utilization that was part of the department’s Federal Lands to Parks program (FLP) application.

• The property may not be sold, leased, assigned or otherwise disposed, except to another government agency and with the approval of the Secretary of the Interior. The department may enter into agreements with third parties to provide recreational facilities and services compatible with the FLP application and any amendments to that document.

• The development of facilities on the property shall comply with the requirements of the American with Disabilities Act (ADA).

• Groundwater under certain portions of the property is contaminated. Groundwater under any portion of the property may not be used for any purpose without the approval of the U.S. Army.

• Some portions of the property have restrictions in their deeds related to digging or disturbing the soil including, but not limited to, raking, scratching, scraping, tilling, excavating, drilling, trenching, or plowing. These areas include: the main landfill, Deterrent Burning Ground, Landfill #4, Landfill #5, the Oleum Landfill, the New Acid Pond, the “Geotube” dredge material disposal site, and the easement associated with any process sewer pipeline. Although the deeds have not yet been modified, the restrictions related to surface disturbance are no longer required for Landfill #4, the Oleum Landfill and the New Acid Pond.

• Some portions of the property were treated for contamination down to a depth of four feet but the possibility exists that contaminants may still exist below this level. As a result, these areas may not be used in ways that disturb the soil below four feet.

5. **RAIL LINE EASEMENT**

The Wisconsin Department of Transportation (DOT) purchased a permanent easement along the main north-south rail line that runs through the BAAP property, including approximately 2.5 miles that runs across, or along the border of, the parcels transferred to the department. The DOT and the Wisconsin River Rail Transit Commission subsequently entered into an interim trail use agreement with the department allowing for use of the corridor as part of the State’s rail-trail network. The lease is subject to possible future reconstruction and reactivation for rail service.
6. RAPID ECOLOGICAL ASSESSMENT (REA)

The Wisconsin Natural Heritage Inventory program conducted an evaluation focusing on rare plants, selected rare animals, and high-quality natural communities at SPSRA.34 The assessment identified two areas (SPSRA Baraboo Hills Woodland and SPSRA Prairie and Savanna) that warranted high protection and restoration considerations in the master plan development. These areas, known as Primary Sites, were identified because they generally encompass the best examples of rare and representative natural communities, documented occurrences of rare species populations, or opportunities for restoration or connections to nearby areas. In addition, the REA identified three other high priority sites; two focused on grassland birds and one focused on shrubland birds.

The REA is available on the department’s web site.

7. ENVIRONMENTALLY-RESTRICTED AREAS AND ISSUES

The site’s former use as an industrial complex resulted in spills of liquids with some level of toxicity. More problematic were the disposal methods used for various materials used in production. Although the U.S. Army and its contractors used methods common at the time, it is now understood that these disposal practices inadvertently resulted in contamination of soils and the underlying groundwater. The U.S. Army has spent over $200 million removing buildings and remediating contamination issues. As a result, only a small number of sites have restrictions on their future use. The environmentally-related issues and restrictions are described here:

a. Groundwater

Four plumes of groundwater are contaminated due to previous disposal practices or spills. The areas where contamination occurred include the Propellant Burning Ground, Deterrent Burning Ground, Rocket Paste Area, Nitrocellulose Production Area, and the fuel oil release site near the former powerhouse (near the main gate). Approximately 200 monitoring wells have been placed near and down-gradient of these sites, both on and off the BAAP property to monitor groundwater contamination. It is possible that additional monitoring wells may be installed in the future. The U.S. Army retains the permanent right to access all parts of the property to monitor existing or future wells. Although recreational use around these wells is not prohibited or restricted, the department may need to take measures to prevent damage to the above-ground well casings. A map of the locations of the contaminated groundwater plumes and the existing monitoring wells is located on the department web site. The department must receive approval from the U.S. Army before using groundwater under SPSRA.

b. Landfills, capped sites, and clean up areas

Eleven landfills or sites that were capped exist on the BAAP property, with seven on SPSRA. The caps of four of these sites on SPSRA are required to be protected and maintained in grass cover (main landfill, Landfill #5, the Deterrent Burning Ground, and the Geotube site). The U.S. Army is responsible for maintaining and monitoring these sites. They are closed to public access. The Oleum landfill, the New Acid Pond site, and Landfill #4 are no longer required to be maintained with a grass cover and are open to public access.

As noted above, some portions of the property were treated for contamination down to a depth of four feet but the possibility exists that contaminants may still exist below this level. As a result, these areas may not be used in ways that disturb the soil below four feet.

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34 The REA also included lands that were recently transferred to the Ho-Chunk Nation.
c. Final Creek – Settling Ponds area

The topography of the BAAP property tilts slightly southward and, combined with a series of ditches and sewer lines, a large portion of the property drained to a small swale at the south end of the Magazine Area (M1). This swale contained four settling ponds which were dredged in the 1970s to remove contaminated sediments. These sediments were subsequently placed in the main landfill. The entire Settling Ponds area now meets the environmental standard for recreational use.

8. ACCESS INTO THE MAIN PART OF SPSRA

Based on the distribution of existing roads, road access to the main part of SPSRA is limited to only about one mile from USH 12. Other options to access the main part of the property (the Bluff Vista, Northeast Moraine, and Central Grassland units) using existing roads require access across either DFRC lands or HCN lands. The department will need to work with DFRC and HCN to identify which, if any, roads on their lands they would be amenable to allowing long-term public use to access SPSRA and the legal mechanism to permit this use. Another option would be to construct new roads in the Gateway Corridor on department lands.

9. ROADS

Over 150 miles of concrete, asphalt, and gravel roads were constructed on the former BAAP, including a perimeter road that encircles the plant. Today, most are in fair to poor condition. Those in the best condition tend to be those that have been most heavily used to transport the demolished buildings to the main landfill (most of these roads were converted to gravel to hold up to heavy equipment and have been periodically re-graded as needed). Many of the roads or road bases could be re-purposed for different types of trails.

Department ownership boundaries are often located down the middle of roads. The deeds for the parcels that have been transferred provide for the full use of these border roads by both landowners. The department will need to work with DFRC and HCN to identify which border roads to maintain either for public access or management purposes, and how responsibility for repair and upkeep will be allocated.

10. CEMETERIES

Two cemeteries existed on the BAAP property prior to the U.S. Army’s acquisition of land; no burials are believed to have taken place since 1942. The cemeteries will be maintained by the Town of Sumpter. The Thoelke Cemetery is located in the M3 parcel, in the northeastern section of the former Magazine Area. The Pioneer Cemetery is located in the O6 parcel in the north central part of the BAAP on HCN lands.

11. REMAINING BUILDINGS

Of the over 1,400 buildings that were erected as part of plant operations, nearly all have been removed. Although only a handful of structures remain, remnant building materials remain scattered around the former building sites in the form of various types of rubble. The remaining buildings on SPSRA are described here along with associated limitations and intended future uses.

a. Administrative building (Building 207)

Located near the main entrance off of USH 12, this building has office space, a meeting room, bathrooms, and storage. The Badger History Group was using the meeting room for a small museum, but with the transfer of the ownership of the building to the state, the building is required to meet accessibility codes in order to be open to the public. As a result, the museum was closed to the public. Updating the building to meet required accessibility and to address some safety and operational issues is estimated to cost approximately $100,000.
b. Weigand’s Bay Pump House

The former Pump House on Lake Wisconsin has largely been torn down and all contaminants have been remediated. A portion of the remaining structure, a concrete frame, could provide the foundation for a fishing platform or pier on Weigand’s Bay. The water depth along the structure is approximately 20 to 30 feet and the bay is known to hold large populations of pan and game fish. The structure provides an opportunity to create a high quality fishing experience for people with accessibility limitations. Department lands on the peninsula abut land owned by the Town of Merrimac. There is not contiguous public ownership from Weigand’s Bay to the rest of the SPSRA property.

c. Bunkers

At the department’s request, five storage bunkers in the former “Nitro” area (P2) have been left to provide potential bat hibernation sites. If extra material is added to the tops of the bunkers and their fronts are more secured and insulated, the bunkers could provide stable temperatures and high humidity, favorable conditions for bat hibernation. Unlike caves or other natural hibernation sites, the bunkers could be cleaned and disinfected to reduce exposure to the fungus that causes white-nose syndrome. The bunkers can also be sealed to prevent disturbances to hibernating bats. Although they present some safety issues associated with the drop-off from the top, the bunkers do not have any contamination issues and do not have use restrictions.

d. Storage and other buildings

Four buildings remain on the department’s lands. The largest, south of the Oleum landfill, is approximately 100’ by 300’ and is partly used by DFRC to store hay in exchange for DFRC allowing the bunkers on their land to be used for bat hibernation and research (rather than hay storage). Structurally, this building is in generally good condition, although a number of repairs are needed. The other buildings, which are near the main entrance, include a pair of “Quonset Hut” structures and an open-sided storage building. The buildings do not have any contamination issues or use restrictions.

12. RESERVOIRS

Operation of the plant required massive amounts of water. The U.S. Army built two large reservoirs (four and six million gallons) more than halfway down the South Bluff on the northern boundary of the property. The concrete reservoirs remain and are filled to different depths. Currently the only source of water is from precipitation and groundwater. The valves that drain each reservoir are closed and inoperable. The west reservoir appears to hold about three feet of water, likely due to cracks in the concrete at about this level. The larger east reservoir has been nearly full for many years. A six-foot fence has been erected around the reservoirs as a safety precaution. The east reservoir holds approximately 1,200 neotenic salamanders.

13. FARMING AGREEMENTS

Currently, the department has farming agreements with the DFRC covering about 150 acres of land, in 9 fields, to incorporate into their crop rotation. The fields are planted in alfalfa/grass, winter wheat, corn, and soybeans. While there was extensive grazing in the past (prior to the department receiving the parcels), currently no grazing occurs on department lands. In addition to the acres the DFRC currently rents, they have expressed interest in potentially renting additional acreage from the department for crops, bedding material, or grazing. DFRC has also assisted the department by mowing and spraying herbicides to help maintain the roads and road shoulders on department lands.
14. WISCONSIN ARMY NATIONAL GUARD TRAINING USE

The BAAP property has served as a training site for military rotary wing aircraft (helicopters) from the Madison-based unit of the Wisconsin Army National Guard for many years. The BAAP site is desirable from the WIARNG’s perspective because it provides a tactical flight training area for aviation crewmembers in relatively close proximity to their home base (the next closest flight training area is Fort McCoy). Current training use of the property includes high and low level flying, night flights, landings in different settings, and moving concrete-filled barrels to mimic transporting supplies and large water drops.

The frequency and timing of training at SPSRA varies depending on crewmembers’ availability, deployment schedules, training requirements, and other factors. Typically, the WIARNG flies about eight flights per week at SPSRA (one to two helicopters, three to five days a week). Flights over the property are typically less than 60 minutes, with many occurring after dark (to allow “night vision goggle” training).

The department supports the WIARNG continuing to conduct limited training exercises at SPSRA, including their use of the site next to the main landfill. However, unless the V1 deed includes specific language allowing future use by the WIARNG, the NPS has informed the department that WIARNG use of the V1 site will have to be phased out. The WIARNG is in discussions with the U.S. Army, General Services Administration, and the National Park Service to determine if options exist to include language in the deed before is transferred to the department.

15. LAKE WISCONSIN OVERLOOK

Along the southeastern corner of the property is an approximately 50-acre parcel between STH 78 and Lake Wisconsin. The department’s ownership doesn’t extend to the water (Wisconsin Power & Light owns the sliver of land along the shore). Given the very steep hillside along the river here, not having contiguous ownership to Lake Wisconsin is not relevant since there is not a practical way to provide shore access. With some modest tree trimming, this parcel would have a fine view of Lake Wisconsin and the opposite lands.

16. DRINKING WATER

The buildings on the HCN and department lands currently source their drinking water from a Bluffview Sanitary District well. The department will work with the BVSD to determine future options for the department’s continued use of water from this well. Alternatively, the Merrimac Sanitary District may, with funding from the U.S. Army, construct a public water supply for the overall area to address long-term drinking water needs. The department will work with the Merrimac Sanitary District and the U.S. Army to determine options for providing drinking water at SPSRA if a new water system is developed.

17. OTHER ISSUES THAT AFFECT THE FUTURE USE OF THE PROPERTY.

The department’s management of the property is subject to the Americans with Disabilities Act and the National Historic Preservation Act.
F. Regional context

1. OTHER PROTECTED LANDS

SPSRA sits in close proximity to other publicly-accessible lands. Other conservation properties within 15 miles include:

<table>
<thead>
<tr>
<th>State Parks</th>
<th>State Natural Areas</th>
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<tbody>
<tr>
<td>Devil’s Lake</td>
<td>Ableman’s Gorge</td>
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<tr>
<td>Mirror Lake</td>
<td>Baraboo River Floodplain Forest</td>
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<tr>
<td>Natural Bridge</td>
<td>Baxter’s Hollow</td>
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<td></td>
<td>Cady’s Marsh</td>
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<td>Devil’s Lake Oak Forest</td>
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<td>East Bluff (DLSP)</td>
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<td>Fern Dell Gorge</td>
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<td>Ferry Bluff</td>
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<td>Gibraltar Rock</td>
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<td>Hemlock Draw</td>
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<td>Honey Creek</td>
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<td>Lodi Marsh</td>
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<td>Lower Narrows</td>
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<td>Lost Lake</td>
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<td>Mazomanie Bottoms</td>
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<td>Mazomanie Oak Barrens</td>
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<td>McGilvra Woods</td>
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<td>Natural Bridge and Rockshelter</td>
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<td>Pan Hollow</td>
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<td>Pewits Nest</td>
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<td>Pine Hollow</td>
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<td>Pine Island Savanna</td>
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<td>Parfrey’s Glen</td>
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<td>Schluckebier Prairie</td>
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<td>South Bluff/Devil’s Nose</td>
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<td>Dell Creek</td>
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<td>Lodi Marsh</td>
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<td>Pine Island</td>
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<td>Waunakee</td>
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<tr>
<th>State Fishery Areas</th>
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<td>Baraboo River (Remnant)</td>
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<td>Hinkson Creek</td>
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<tr>
<td>Leech Creek (Remnant)</td>
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<td>Lodi Spring Creek</td>
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<td>Rowan Creek</td>
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<th>Other properties</th>
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<tr>
<td>Baraboo Hills State Recreation Area</td>
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<td>Ice Age Trail</td>
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<td>Lower Wisconsin State Riverway</td>
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<td>Marx-Fish Lake Natural Resource Site</td>
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<tr>
<td>Riverland Conservancy preserves</td>
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<td>US F&amp;WS Waterfowl Production Areas</td>
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Many SNAs are nested within other larger properties, including several that are owned by The Nature Conservancy or other private conservation organizations.

2. LAND USES AND TRENDS

With a wealth of natural resources, easy access to the Madison metropolitan area via Interstate 90-94 and USH 12, and a varied and scenic landscape, not surprisingly Sauk County is drawing many new residents. Indeed, over the last decade the county’s population grew at twice the state’s average rate of growth. On a percentage basis, the Village of Lake Delton and the Town of Dellona have experienced the most rapid growth over the last ten years. Population growth has resulted in more jobs, more homes and more development pressures in different parts of the county. In turn, this has led to the price of agricultural lands increasing faster in Sauk County (at an 11% annual average increase for the last decade) than in the state (6.6% annual average increase). The price of forestland in Sauk County has also risen more than the state average over the last ten years.

Land use in Sauk County and the surrounding counties is dominated by farming which are typically modest-sized operations. About two-thirds of the land in Sauk County is in farms with an average farm size of about 185 acres.
Over the last decade the number of farms in the county has gradually increased while the average size has declined a corresponding amount. Although the amount varies somewhat from year to year, just over half the land in farms in Sauk County is in crop production, about a quarter is in woodland, and about 10% is in pasture. The remainder is in farmsteads, ponds, roads and various structures.

3. RECREATIONAL-RELATED

Understanding the supply and demand of recreational resources is an important component of planning for recreational opportunities. If there is a demonstrated shortage of a particular resource, it is important to know what the future demand for that resource will be. As part of developing the Statewide Comprehensive Outdoor Recreation Plan (SCORP) the department conducted a series of town meetings across the state in 2005. These meetings collected over 1,400 responses about citizen's perceptions of recreation issues and barriers to recreation. The 2005 SCORP details recreational issues mentioned by respondents from the Southern Gateway Region (in which SPSRA resides):

- Budget constraints on park and recreation programs
- Increased competition for natural resources
- Increasing ATV usage and associated impacts
- Increasing multiple-use recreation conflicts
- Lack of maintenance on parks and recreation areas
- Lack of park and recreation staff
- Overcrowding
- Poor water quality impairing recreation
- Protecting silent sport areas

These results show the need for well-maintained public lands and park facilities in the region which allow diverse recreational activities while providing an exceptional user experience with minimal conflicts between incompatible uses.

Another way to understand this demand is by gauging user perceptions of a particular recreation amenity. The 2005 SCORP also assessed visitor perceptions of their top recreation needs. For the Southern Gateways Region, these needs include more:

- ATV usage opportunities
- biking trails
- camping opportunities
- canoeing opportunities
- cross-country skiing opportunities
- hiking and horse trails

4. ECOLOGICAL AND HABITAT-RELATED

Eastern Sauk County sits at the confluence of three major ecological zones. To the west lies the unglaciated Western Coulee & Ridges, a landscape characterized by steep-sided valleys and many cool, clear streams supporting abundant trout populations. To the north lies the Central Sand Plains, a wide, flat, sandy region that was once mostly the bed of the enormous Glacial Lake Wisconsin. To the east lies the Central Sand Hills, an area
dominated by the rolling and somewhat random topography that typifies the end and ground moraines left behind by glaciers.

This part of the state has opportunities to provide a variety of important ecological outcomes. Some of the major opportunities for habitat management and restoration include dry and dry-mesic prairies, oak openings, oak woodlands, and southern dry-mesic forest. One of the most prominent features of the region is the Baraboo Range – a large, ancient, quartzite monadnock that rises 500 feet above the surrounding plains. The Range supports the largest block of hardwood forest in southern Wisconsin and is critical habitat for many species, in particular forest-interior birds.

Figure 18: View of the Northeast Moraine unit looking east. The large sand excavation pit is in the foreground and Lake Wisconsin is at the top of the photo. Land owned by the Ho-Chunk Nation is in the foreground. The east end of the Central Grassland is visible on the right side of the photo.