

Blue Mound State Park



Draft Master Plan and Environmental Analysis



December 2020

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Wisconsin Department of Natural Resources

Preston D. Cole – Secretary

Natural Resources Board

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Gregory Kazmierski, Vice Chair

Julie Anderson, Secretary

William Bruins

Terry Hilgenberg

Bill Smith

Marcy West



101 S. Webster St, P.O. Box 7921
Madison, WI 53707-7921

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MASTER PLAN TEAM MEMBERS

Plan Acceptance Team

Terry Bay, Director, Bureau of Facilities and Lands
Diane Brusoe, Deputy Administrator, Division of Fish, Wildlife and Parks
Drew Feldkirchner, Director, Bureau of Natural Heritage Conservation
Justine Hasz, Director, Bureau of Fisheries Management
Eric Lobner, Director, Bureau of Wildlife Management
Jim Warren, Director, Bureau of Forestry Field Operations

Sponsor Team

Brigit Brown - Parks and Recreation Management, Recreation Management Section Chief
Brian Hefty – Parks and Recreation Management, Deputy Bureau Director
Pete Engman – Wildlife Management, Deputy Bureau Director
Todd Kalisch – Fisheries Management, Deputy Bureau Director
Joe Henry – Natural Heritage Conservation, Field Team Leader
Jim Woodford – Natural Heritage Conservation, Field Operations Section Chief

Core Team

Kevin Swenson – Parks and Recreation Management, Park Superintendent
Brigit Brown - Parks and Recreation Management, Recreation Management Section Chief
Craig Anderson – Parks and Recreation Management, State Park Ecologist
Nate Fayram – Natural Heritage Conservation, Southwest Field Ecologist
Katie Godding – Facilities and Lands, GIS Specialist/Cartographer
Tom Hill – Forestry, Forester
David Rowe – Fisheries Management, Fisheries Team Supervisor
Julie Widholm – Wildlife Management, Wildlife Biologist
Phil Rynish – Facilities and Lands, Lead Planner

Technical Team

Diane Milligan, Legal Services, Deputy Chief Legal Council
Jonathan Kult, Facilities and Lands, GIS Specialist
Brad Bates, Parks and Recreation Management, Park Ranger

Additional Contributors

Jake Cassidy – Facilities and Lands, GIS Specialist
Michael LaBissoniare – Facilities and Lands, Land Agent
Tom Watkins – Facilities and Lands, Property Planner (Retired)
Savannah Erzen – Facilities and Lands, Property Planner
Mike Buchta – Technical Services, Web Design
Rich Schmale – Facilities and Lands, Engineering and Construction Management Section Chief

GLOSSARY OF TERMS

Acquisition authority: The Legislature authorized the department to acquire and manage land for a variety of conservation and recreation purposes including state forests, parks, wildlife areas, fishery areas, recreation areas, trails, and natural areas (s. 23.09(2)(d), Wis. Stats.). In addition, the department is authorized to acquire and manage lands and facilities such as forest nurseries, experimental stations, fish hatcheries, and game farms, to support conservation and recreation properties. The Natural Resources Board approves the establishment of department properties for conservation and recreation purposes, which includes a formal name, a designation, an acreage goal and a project boundary – together these form the acquisition authority – the approved name or authority (typically the name of a property) under which the department can acquire land.

Acreage goal: The number of acres the department is approved to acquire within a given project boundary.

Administrative Code: The set of rules promulgated by state agencies to interpret and enforce laws (statutes) passed by the Legislature. Rules promulgated by DNR are given the prefix ‘NR’ for ‘natural resource rule’.

All-Terrain Vehicle (ATV): As defined in s. 340.01(2g) Wis. Stats, a commercially designed and manufactured motor-driven device that has a weight, without fluids, of 900 pounds or less, has a width of 50 inches or less, is equipped with a seat designed to be straddled by the operator and travels on three or more low-pressure or non-pneumatic tires.

Amendment: See ‘Master Plan Amendment’.

Best Management Practice (BMP): An action, or combination of actions, that is determined to be an effective and practicable means of achieving a management objective.

Deed Acres: Acreage derived from DNR Land Record System based off the acquisition deed and described in the legal description. The acres described in a deed often differ by a small amount from the acres calculated using Geographic Information System (GIS) software. See “GIS acres” below.

Ecological Landscapes: Sixteen areas of Wisconsin with different ecological attributes and management opportunities that can be used to identify the best areas of the state to manage for different natural communities, habitats, aquatic features, and native plants and animals from an ecosystem management perspective. The boundaries are substantially based on the National Hierarchical Framework of Ecological Units developed by the U.S. Forest Service, with some subsections combined to produce a manageable number of units.

Ecosystem management: A system of planning, protecting, managing, and restoring ecosystem composition, structure, and function to ensure sustainability across a range of spatial and temporal scales and to provide desired ecological, economic, and social conditions and benefits.

Forest certification: Independent, third-party certification programs that verify that forest management meets strict standards for ecological, social, and economic sustainability. DNR lands are dual certified under Forest Stewardship Council (FSC) and Sustainable Forestry Initiative (SFI) standards.

GIS acres: Acreage calculated from DNR spatial datasets using a Geographic Information System (GIS). When applied to DNR Managed Lands, there will usually be slight differences between GIS acres and deed acres due to different methods of collecting and recording parcel geometry.

Habitat classification: Generalizations of cover types from the Wisconsin Field Inventory & Reporting System (WisFIRS) used for property planning.

Handbook: A DNR guidance document that contains procedures, standards, instructions, and techniques on a specific, focused topic.

Land management classifications: Classifications authorized and described in ch. NR 44, Wis. Admin. Code, and are applied to a property or management area within a property to describe the general management objective for that area as determined during the master planning process. Land management classifications generally frame the types of land management and public use activities that will be pursued in each management area.

Manual Code: A DNR policy/procedure document. Manual Codes are established to communicate specific procedures that employees need to follow to comply with department policies or Administrative Codes.

Master Plan: A document that describes the authorized resource management, recreation management, and facility development that may take place on a DNR property. Master plans for DNR properties are developed according to the guidelines set forth in Chapter NR 44, Wis. Admin. Code and require approval by the Natural Resources Board. At heart, master plans are “instruction manuals” that describe the property’s vision, goals and objectives, the recreational uses and habitats that will be provided, and the management strategies and techniques that will be used.

Master Plan modifications: In some situations, conditions or opportunities change at properties that result in requests to modify master plans. Chapter NR 44, Wis. Admin. Code provides three methods to change master plans:

Master Plan Revision: A master plan revision process is pursued in order to potentially change property-level goals or objectives. This degree of change nearly always leads to changes in the management purposes and objectives for much of or the entire property. Revisions must be approved by the Natural Resources Board.

Master Plan Amendment: An amendment process is used when proposed modifications include a change to the management objectives for one or a few management areas on a property, but not a change to the overall property’s goals or objectives. In these cases, there is usually a desire or initiative to change one or more of the “land management classifications” assigned to management areas.

Amendments must be approved by the Natural Resources Board.

Master Plan Variance: A variance is a process to change a management activity or use described in a master plan in a manner that is consistent with the area’s land management classification and does not constitute a change in an objective for management or public use of the area as specified in the plan. That is, variances are used when the department seeks to achieve the objectives for a management area in a different or additional way. Examples could include using new habitat management techniques or adding a recreational use to an area. Variances do not entail a change to a property’s land management classifications nor its goals and objectives. A variance may be approved by the DNR Secretary or a Division Administrator.

Natural Community: An assemblage of different plant and animal species living together in a particular area, at a particular time, in a particular habitat, interacting with one another and with the abiotic environment around them, and subject to primarily natural disturbance regimes. Assemblages that are repeated across a landscape in an observable pattern constitute a community type. No two assemblages are exactly alike.

Natural Heritage Inventory (NHI): A methodology and database for collecting, characterizing, storing, and managing data on rare species, natural communities, and natural features throughout the state. Wisconsin’s NHI program is housed in DNR’s Bureau of Natural Heritage Conservation.

Natural Resources Board (NRB): The 7-member citizen board that sets policy for the department and exercises authority and responsibility in accordance with governing state laws. The NRB approves all master plans as well as plan revisions and amendments.

NR 44: Chapter in the Wisconsin Administrative Code that authorizes, establishes, and describes the process for developing master plans for DNR properties.

Primary Site: Ecologically important site identified on a department property through a biotic inventory or assessment. Primary Sites are delineated because they encompass the best examples of rare and representative natural communities; documented occurrences of rare species populations; and/or opportunities for ecological restoration or connections. These sites warrant high protection and/or restoration consideration during the development of property master plans.

Project boundary: Spatial representation of an area (e.g., a property) within which the department has authority to acquire land. A project boundary represents an area of acquisition authority.

Recreation Opportunities Analysis (ROA): A department study of existing outdoor-based recreation opportunities and future recreation needs around the state. The study identifies future needs for providing high-quality recreation experiences and the role of DNR properties in helping meet those needs. The final report can be viewed on the DNR website at dnr.wi.gov, keyword: ROA.

Species of Greatest Conservation Need (SGCN): Wildlife species (including invertebrates, birds, fish, mammals, reptiles, and amphibians) in Wisconsin that are in need of conservation action because they: are already listed as threatened or endangered; are at risk due to threats to their life history needs or habitats; are rare due to declining populations, abundance, and/or distribution; show declining trends in their habitats and populations. SGCN are identified in Wisconsin’s Wildlife Action Plan.

Statewide Comprehensive Outdoor Recreation Plan (SCORP): A report that periodically evaluates status, trends, demand, and needs for outdoor recreation throughout the state. The SCORP is a primary source of information on outdoor recreation in Wisconsin.

Statutory property designation: The official designation of a property (e.g., State Park, State Wildlife Area, State Forest, State Natural Area, etc.), authorized and defined in Wisconsin Statutes and Administrative Code, that describes what the primary purpose of the property is and, therefore, frames the general scope of land management and public use that can take place there.

Tension Zone: An area of transition between two distinct ecological zones. There is a pronounced tension zone in Wisconsin that runs from northwestern to southeastern Wisconsin, separating the northern forest (including the boreal element) from the southern forest and prairies. Many species reach the limits of their ranges in this zone.

Utility Terrain Vehicle (UTV): A motor driven device, sometimes referred to as a “side-by-side” designed to be used primarily off-highway that has a net weight of less than 2,000 pounds, four or more low-pressure or non-pneumatic tires. Additionally, the vehicle must have a steering wheel, a tail light, a brake light, two headlights, a width of not more than 65 inches, and a roll bar or similar device designed to reduce the likelihood of injuries as the result of a rollover, all as originally manufactured in accordance with s. 23.33(1)(ng) Wis. Stats. Golf carts, low-speed vehicles, dune buggies, mini-trucks, homemade, tracked, or modified vehicles are not utility terrain vehicle.

Variance: See ‘Master Plan Variance’.

Wildlife Action Plan (WAP): The comprehensive plan for the conservation of rare and declining species and their habitats in the state. The Wisconsin WAP identifies Species of Greatest Conservation Need (SGCN) and lays out a strategy to conserve and sustain them and their habitats for future generations.

Wisconsin Environmental Policy Act (WEPA): A state law designed to encourage informed decision-making by state agencies. WEPA requires state agencies to consider the effects of their policies, plans, programs, and actions on the quality of the human environment and to disclose those impacts to the public. WEPA created Chapter 1.11 of the Wisconsin Statutes. DNR’s WEPA responsibilities are further described in Chapter NR 150 of the Wisconsin Administrative Code.

Wisconsin Field Inventory and Reporting System (WisFIRS): A database and web-based application used by DNR staff to store habitat data collected in the field, and to plan for and track vegetation management practices.

COMMONLY USED ACRONYMS

ATV	All-terrain vehicle
BMP	Best Management Practices
BMSP	Blue Mound State Park
CTH	County Highway
DNR	Department of Natural Resources
EL	Ecological Landscape
NHI	Natural Heritage Inventory
NR 44	Chapter NR 44, Wisconsin Administrative Code, Master Planning for Department Properties
NRB	Natural Resources Board
PILT	Payment in lieu of taxes
REA	Rapid Ecological Assessment
SCORP	Statewide Comprehensive Outdoor Recreation Plan
SGCN	Species of Greatest Conservation Need
SNA	State Natural Area
STH	State Highway
UTV	Utility Terrain Vehicle
WisFIRS	Wisconsin Field Inventory and Reporting System
ROA	Recreation Opportunity Analysis

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CHAPTER 1 : PLAN OVERVIEW

PURPOSE AND MANAGEMENT AUTHORITY

The purpose of this master plan is to guide the Wisconsin Department of Natural Resources (DNR) management of Blue Mound State Park (BMSP). A master plan establishes the levels and types of public uses that are permitted on a property as well as the authorized resource management and facility development that may take place. All DNR properties are required to have a master plan (ch. NR 1.60, Wisconsin Administrative Code). Master plans are developed according to guidelines set forth in Wisconsin Administrative Code Chapter NR 44. Only those management activities and techniques, recreational uses, and facilities identified or referenced in this master plan are authorized.

The formation of master plans benefits the public and the department by clearly defining management of the public resource and ensuring management follows a defined track, regardless of staff changes. As a result of this plan, Blue Mound State Park is expected to continue to provide high-quality natural resources and recreational experiences for present and future generations.

This property plan builds upon the substantial foundation laid by previous department planning efforts and studies. In addition to the foundational materials, staff expertise and comments from the general public, stakeholders, local governments and partner agencies were considered as the plan was formed.

DNR plans most properties through regional planning efforts. However, BMSP is planned as an individual property. Following approval of this proposed plan and the Southwest Savanna Regional Master Plan, the BMSP Master Plan is expected to be incorporated into the Southwest Savanna Regional Master Plan and be updated as part of the regional planning cycle.



Image 1.1. East Tower during winter 2019. DNR Image.

THE PROPERTY: BLUE MOUND STATE PARK

Blue Mound State Park encompasses 1,153 acres atop the highest point in southern Wisconsin, straddling the Dane and Iowa county line. Approximately 930 acres of the park's acreage falls in the Town of Brigham in Iowa County, with the rest in the Town of Blue Mounds and Village of Blue Mounds in Dane County.

The park offers over 20 miles of scenic trails for hiking, off-road bicycling, snowshoeing and cross-country skiing. The park also features camping, a swimming pool and a splashpad. A bike or hike-to campground, with access from the adjacent Military Ridge State Trail, is also located in the park.

Blue Mound State Park is in Wisconsin's Driftless Area, a region of the state untouched by glaciers for at least the past 2.4 million years. Blue Mound, for which the park is named, towers several hundred feet above its surroundings. The mound is capped by hard Niagara dolomite preventing the erosion that, over the past 400 million years, cut down the surrounding limestone and sandstone areas. Today, the park hosts several natural communities, including southern mesic and southern dry-mesic forest. Over the



Image 1.2. The view from the West Tower at Blue Mound State Park. Photo by Katie Godding, DNR.

course of the year, 150 bird species, deer, fox, bats and many other mammals and insects, including some that are rare, share the park with visitors.

Regionally, Blue Mound State Park plays an important role in DNR's recreation and natural resources management efforts. Blue Mound State Park offers recreation facilities similar to many of the 16 state parks in the Southern Gateways region, the ten-county Statewide Comprehensive Outdoor Recreation Plan (SCORP) region that encompasses BMSP. The park's topography, scenic beauty, proximity to Madison and variety of trail-based recreational offerings make it a popular recreation destination. Camping, mountain biking and cross-country skiing are premier offerings. Ecologically, Blue Mound State Park is primarily located in the Southwest Savanna ecological landscape and contains several natural communities for which there are major or important conservation opportunities, including oak woodland and southern mesic forest. A small portion of the park is in the Western Coulees and Ridges ecological landscape.

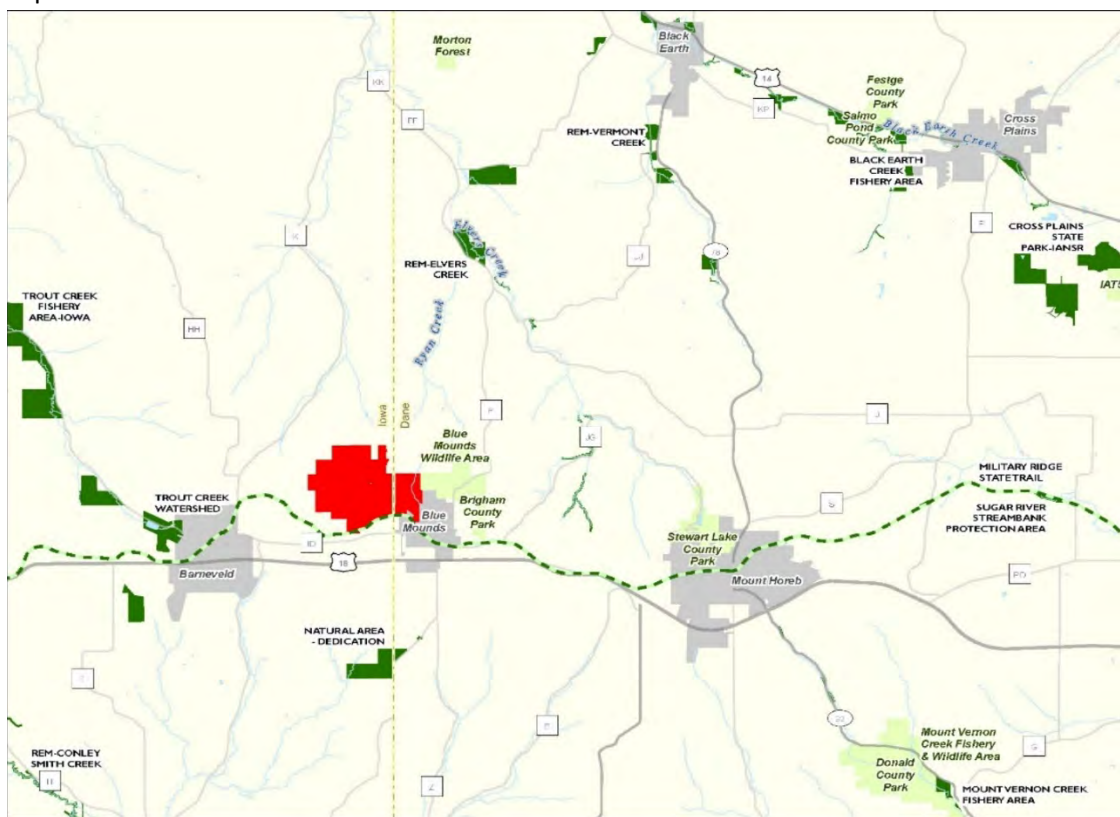


Figure 1.1. Blue Mound State Park, in red, and surrounding areas.

OVERVIEW OF THE BLUE MOUND STATE PARK MASTER PLAN AND PROCESS

This Blue Mound State Park Draft Master Plan is a revision of the 1985 Blue Mound State Park Master Plan Concept Element. This 2020 Draft Master Plan is compliant with ch. NR 44, Wis. Admin. Code and replaces

the 1985 plan and its variances (2000, 2012 and 2014). This property master plan accomplishes the following:

- Provides a vision and framework for the use, development and management of BMSP for the next 15 years and beyond.
- Identifies management areas and assigns land management classifications.
- Guides property management through descriptions of management objectives and specific management prescriptions.

This Blue Mound State Park Draft Master Plan was drafted following the master plan revision process described in NR 44. Property master planning is also guided by DNR's commitment to meeting the ecological, environmental, recreational and social needs of current generations while protecting the property's ability to fill the same roles for future generations. Previous planning efforts, assessments of the property and its surrounding region and staff expertise also provided foundation for the development of this plan.

Public involvement played an integral role in development of this proposed plan. While the public was involved throughout the process, input from the public was solicited in two specific instances prior to the completion of this draft plan:

- **Initial Public Involvement Period** during which the public aided DNR in identifying pertinent topics and issues to address during the planning effort.
- **Management Alternatives Public Involvement** during which the public was asked to review management options and concepts the department was considering for inclusion in the draft master plan.

Additional public input opportunities to comment on the draft and proposed plan include:



Image 1.3. Trail sign. Photo by Phil Rynish, DNR

- **Draft Master Plan Review** during which the public reviews this draft master plan and offers comments prior to the plan being sent to the Wisconsin Natural Resources Board (NRB) for consideration of approval.
- **Proposed Master Plan submitted to NRB for approval** will be a future step during which the public may submit comments or testify directly to the NRB prior to consideration for approval.

A full accounting of public involvement during the formation of this draft master plan is available in Chapter 6 of this document.

SUMMARY OF THE MASTER PLAN

The Blue Mound State Park Draft Master Plan proposes continuing much of the park's current recreation management while improving habitat for native plant and wildlife species. Changes in proposed management are summarized here; the full management plan is described in Chapter 2. Anticipated environmental effects, and alternatives to the proposed management that were considered by the planning team, are described in Chapters 4 and 5, respectively.

Proposed Changes to Recreation Management

Changes to recreation management include a redesigned mountain bike trail system, authorizing Class 1 e-bikes on mountain bike trails, a more cohesive snowshoeing experience and a snowmobile trail connecting the Military Ridge State Trail to the county trail system north of the park.

Mountain Biking Trail Network Redesign

This plan proposes a redesigned mountain bike trail system as shown on Map E. The current mountain bike trail system is frequently closed during warm months due to sections of trail that frequently erode and others that become too water-logged to ride. The proposed trail system is designed to limit these water management issues that currently cause trail closures. The proposed redesigned trail system utilizes portions of the current trail system that do not experience water management issues currently. Approximately 8.1 miles of new trail construction are also proposed. Most current trails that are replaced by newly constructed segments will be closed and restored to native vegetation.

The current trail system is considered a technical trail system that is not well-suited for beginner riders. The proposed trail system is designed to create mountain biking opportunities for a full spectrum of skill levels. It maintains some of the park's most rugged trail riding opportunities while also providing options for beginner and intermediate riders.

Electric Bicycles (E-Bikes)

This plan proposes allowing the use of Class 1 electric bicycles (e-bikes; as defined in s. 340.01 (15ph)(a), Wis. Stats) on bike trails in BMSP, but allows the property manager to close or open specific bicycle trails to e-bikes after the public has had a chance to give input. The plan does not propose allowing Class 2 or Class 3 electric bicycles on any bicycle trails at BMSP.

Snowmobile Trail

This plan proposes changing the corridor utilized by snowmobiles to connect the Military Ridge State Trail to county trail systems north of the park. The current snowmobile route utilizes the non-paved areas of Mounds Park Road and Ryan Road. Based on public comments, many snowmobilers consider this “ditch-riding” to be undesirable. This plan proposes creation of a snowmobile trail utilizing portions of a former service road through the proposed Pleasure Valley Hardwoods Management Area, as well as a new trail through a portion of the park’s grasslands (Map E). This change is proposed to create a more desirable snowmobile experience, which maintains the connection between the Military Ridge State Trail and county trail system, while limiting impacts to the property and its other users.



Image 1.4. Former service road and snowmobile trail at BMSP. This corridor is proposed as a snowmobile trail in this plan.

Snowshoeing

The current designated snowshoe trail system shown on property maps does not depict cohesive loops of trails from popular trailheads and can create confusion for those unfamiliar with the park. At times, this has led to visitors unfamiliar with the park snowshoeing on groomed cross-country ski trails, which can lead to user conflicts. This plan proposes designating three snowshoe loop trails to form a more defined snowshoe system. While snowshoeing will continue to be allowed throughout the property, except on groomed cross-country ski trails, the proposed snowshoe loops shown on Map E will help park users navigate BMSP’s snowshoe experience and reduce user conflict.

The proposed snowshoe loops primarily utilize summer hiking trails and mountain bike trails. One new section of trail is proposed to be built in the Pleasure Valley Hardwoods Management Area to reduce the chance of user displacement due to the proposed snowmobile trail and create a more interesting snowshoe and hiking experience for a portion of the Weeping Rock Hiking Trail. On the park’s west slope, a mountain bike trail that is proposed to be closed due to the mountain bike trail system redesign is proposed to remain open to snowshoeing to complete a loop.

Proposed Changes to Natural Resources Management

The management in this plan conserves the natural resources of BMSP while continuing to provide the outdoor recreation opportunities that draw many visitors. Past natural resources management has been largely passive, except for prescribed burns of the grasslands, invasive species control and ensuring public safety (e.g. removing hazard trees). Proposed natural resources management changes are focused on improving habitat and natural communities within the park.



Image 1.5. Pleasure Valley in February 2020. Photo by Phil Rynish, DNR.

Oak Woodland and Prairie Transition

As is the case throughout BMSP, much of the oak forest in the Oak Woodland and Prairie Management Area (page 28) on the south and west slopes of Blue Mound is aging and beginning to convert to central hardwoods cover types. The strong presence of white oaks in this area presents an opportunity to manage for a transition from oak woodland to oak opening to open grasslands. The department may use timber harvests, prescribed fire, timber stand improvement practices such as single tree selection harvest, and other active management techniques to create oak woodland and oak opening conditions.

This proposed management may have short-term impacts on recreation in the area. However, the resulting conditions are anticipated to provide ecological benefits and are expected to provide an aesthetically pleasing natural setting in the long term.

Oak Management

As previously noted, much of the oak component of BMSP's forest is converting to central hardwoods. Certain areas within the park have been identified as having potential to regenerate oak. The Oak Management Area (page 34) authorizes active management techniques, including timber harvest and prescribed fire to encourage oak regeneration. Without oak regeneration efforts, it is likely that oak will have very limited presence in BMSP. While the Oak Management Area has few recreational facilities currently, those present and other facilities outside the area may be temporarily impacted when management is in progress.

Proposed Real Estate Management

As shown on Map G, this plan proposes expanding the BMSP project boundary by approximately 1,174 acres and contracting the project boundary by 75 acres. This would authorize the department to acquire additional property or easements from willing sellers for resource and recreation management beyond what is currently authorized. From a recreation standpoint, the project boundary expansion would allow for additional recreational facilities, such as hiking, mountain biking and cross-country skiing trails to be developed where feasible. Project boundary expansion and acquisition would allow many areas within the viewshed of the BMSP observation towers to be protected from development. Areas of nearly unbroken forest, some of which is southern mesic forest, are included in the expansion area. These areas are part of the large forest block that is important for forest interior birds and helps create an ecological corridor that continues through BMSP to Brigham County Park and beyond.



Image 1.6. Overlook at BMSP. Photo by Phil Rynish, DNR.

CHAPTER 2 : PROPERTY MANAGEMENT, DEVELOPMENT AND USE

OVERVIEW

This chapter presents the proposed management for Blue Mound State Park. It begins with an outline of the existing natural resources and public use and recreation facilities at the property, then describes the proposed future conditions of the park.

EXISTING NATURAL RESOURCE CONDITIONS

Blue Mound State Park sits atop Blue Mound, the highest point in southern Wisconsin at the edge of Wisconsin's Driftless Area, a region marked by hills and valleys. The majority of the park's project boundary (1,167 acres) is within the Southwest Savanna Ecological Landscape with a small portion (196 acres) in the Western Coulees and Ridges Ecological Landscape.

Table 2.1 shows the land cover of BMSP. The park is predominantly upland broad-leaved deciduous forest composed of oak and northern and central hardwoods cover types. Much of the forest is considered high-quality southern mesic or southern dry-mesic forest. Many areas of the park that have historically been oak dominated forest, including the west and north slopes, are succeeding to central hardwoods with a strong red maple component.



Image 2.1. Sugar maple seedlings carpet the forest floor in southern mesic forest at BMSP. Photo by Craig Anderson, DNR.

Canopy closure is generally high, 80% or greater, throughout the park. The forested areas of BMSP serve as the core protected area that, in conjunction with forest on other surrounding or adjacent public and private lands, create an effectively larger forest block capable of supporting the forest interior birds that have been documented at or near the park. Non-forested areas of the park include approximately 80 acres of upland grass, primarily composed of cool-season grasses with a small remnant prairie near the park's border with Brigham County Park.

A number of rare plants and animals are known to occur in BMSP or the surrounding landscape. Rare plants include American Ginseng, Nodding Rattlesnake-root and Prairie Bush Clover. Rare animals include Acadian Flycatcher, Blanchard's Cricket Frog and Yellow-billed Cuckoo (WDNR, 2015b). BMSP lies within a high potential zone for rusty patched bumble bee (RPBB), a federally endangered species. High potential zones are areas where RPBB is likely present. Additionally, BMSP and surrounding areas in Dane and Iowa counties provide suitable summer roosting and foraging habitat for bats.

A full description of the ecological characteristics of BMSP can be found in the Blue Mound State Park Rapid Ecological Assessment (WDNR, 2015b).

Table 2.1. Existing Blue Mound State Park Land Cover

Land Cover	GIS Acres	% Cover
Upland Deciduous Forest	867	76
Aspen	62	5
Central Hardwoods	21	2
Northern Hardwoods	108	9
Oak	670	59
Walnut	5	1
Upland Coniferous Forest	17	2
Conifer Plantation	17	2
Upland Shrub	37	3
Upland Shrub	37	3
Upland Grass	83	7
Surrogate Grasslands	82	7
Remnant Prairie	1	<1
Developed	141	12

PUBLIC USE AND RECREATION FACILITIES

Blue Mound State Park's scenic beauty, topography and proximity to the Madison metro-area make it a popular recreation property. Trail-based recreation, camping and swimming in the only pool in the Wisconsin State Park System are especially popular.

This section details the existing public use and recreation facilities at BMSP. Planned facilities and future conditions are described in the Proposed Property Management section of this chapter (page 17).

Property Access

Roads & Parking

Two miles of DNR roads are open year-round to the public, with another one mile open seasonally (Map B and Table 2.2). Mounds Park and Ryan roads offer an additional 1.5 miles of access to the property.

Table 2.2 Miles of Existing Blue Mound State Park Roads

NR 44 Road Classification	Open to Public	Open Seasonally to Public	Closed to Public (DNR Staff Service Road)
Primitive Road	0	0	0.6
Lightly Developed Road	0	0	0.4
Moderately Developed Road	2	1	0.2
Non-DNR public road access	1.5		

Public Use

Camping

Blue Mound State Park has two campgrounds, the Family Campground and the Bike/Hike Campground, as shown in Table 2.3 and Map D. Of the 78 total sites in the Family Campground, 31 have electrical receptacles, two are ADA accessible and one is designated for administrative use. Mayberry Cabin, an ADA accessible cabin available for campers with disabilities, is located within the Family Campground. The campground has pressurized water sources and a flush toilet and shower facility. All sites within the Family Campground are auto-accessible.



Image 2.2. Mayberry Cabin. Photo by Kevin Swenson, DNR.

The Bike/Hike Campground contains 12 sites that are bike-to or hike-to accessible only. The Bike/Hike campground is served by a water fountain and vault toilet facilities.

This plan proposes expansion of both the Family Campground and the Bike/Hike Campground, as well as the addition of a group camp area (page 20).

Table 2.3. Existing Blue Mound State Park Campgrounds

Camping Facility	Facilities & Amenities	Campsites	Approximate Developed Campsite Acres*	NR 44 Development Standard
Family Campground	Flush toilet, shower, pressurized water	78	2.34	Modern
Bike/Hike Campground	Vault toilets, pressurized water	12	0.36	Rustic
Mayberry Cabin		ADA Accessible Cabin		

*Assumes an average of .03 developed acres per campsite.

Day Use Areas

Two developed day use areas are present at BMSP. The Mound Top day use area offers views from the highest point in southern Wisconsin from picnic areas and observation towers. The Pool and Trailhead day use area contains many of the park's most used facilities, including major trailheads for many of the park's trail networks, the Friends Shelter and pool and splashpad facilities.

Table 2.4. Existing Blue Mound State Park Day Use Areas

Day Use Area	Facilities & Amenities	NR 44 Development Standard
Mound Top	Charcoal grills, trailheads, picnic tables, benches, playground equipment, large field, two observation towers, picnic shelter, nature center, amphitheater, vault toilets	Modern
Pool and Trailhead	Benches, drinking fountains, trailheads, Friends Shelter, pool, splashpad and changing facilities	Modern

Trails

Blue Mound State Park boasts an extensive trail system that primarily offers opportunities for mountain biking, hiking, snowshoeing and cross-country skiing. Table 2.5. Existing Blue Mound State Park Trails shows the existing trails and their uses. Many of the trails share uses seasonally. For example, many designated hiking trails serve as cross-country ski trails when snow conditions allow. Mountain bike trails are open year-round and groomed for fat-tire biking when snow conditions allow. These dual-use trails

are shown for each activity they allow and therefore some mileages are counted twice. Thus, while Table 2.5 is a good indicator of mileage of trails by use at the park, it should not be used to estimate the total mileage of trails at the park.

Current trail length for each use at BMSP is as follows:

- Mountain/Fat-Tire Biking: 13.6 miles
- Hiking: 9.7 miles
- Cross-country skiing: 13.8 miles
- Snowshoeing: 15.3 miles

While hiking is allowed throughout the park, except on groomed cross-country ski trails, the mileage shown here is for designated hiking trails only. The snowshoeing mileage includes those trails currently shared between mountain biking and snowshoeing.

Table 2.5. Existing Blue Mound State Park Trails

Trail Name	Trail Use	Length (Miles)	NR 44 Trail Development Standard
Holy Schist MBT	Mountain Bike	3.2	Lightly Developed
Basalt & Pepper MBT	Mountain Bike	1.2	Lightly Developed
Chert Dip MBT	Mountain Bike	1.2	Lightly Developed
Gneiss & Smooth MBT	Mountain Bike	1.0	Moderately Developed
Overlode MBT	Mountain Bike	3.9	Lightly Developed
Pokerville MBT	Mountain Bike	2.1	Lightly Developed
Home Stretch MBT	Mountain Bike	0.9	Lightly Developed
Indian Marker Tree Trail	Hike	0.7	Moderately Developed
Picnic Trail	Hike	0.4	Moderately Developed
Pool Trail	Hike	0.7	Moderately Developed
Willow Spring Trail	Hike	0.4	Moderately Developed
John Minix Trail	Hike	1.1	Moderately Developed
Flint Rock Nature Trail	Hike	1.5	Moderately Developed
Spring House Trail	Hike	0.2	Moderately Developed

Trail Name	Trail Use	Length (Miles)	NR 44 Trail Development Standard
Military Ridge Trail Access	Hike	0.3	Moderately Developed
Ridgeview Trail	Hike	0.9	Moderately Developed
Walnut Hollow Trail	Hike	0.5	Moderately Developed
Weeping Rock Hiking Trail	Hike	0.7	Moderately Developed
Pleasure Valley Trail	Hike	1.2	Moderately Developed
John Minix/Pleasure Valley Trails Connector	Hike	0.3	Moderately Developed
Trail from Family Campground to Flint Rock Nature Trail	Hike	0.3	Moderately Developed
Trail from Family Campground to Flint Rock Nature Trail	Hike	0.2	Moderately Developed
Red Loop	Cross Country Ski	3.2	Moderately Developed
Blue Loop	Cross Country Ski	4.6	Moderately Developed
Orange Loop	Cross Country Ski	1.5	Moderately Developed
Green Loop	Cross Country Ski	1.7	Moderately Developed
Yellow Loop	Cross Country Ski	1.2	Moderately Developed
Campground Loop	Cross Country Ski	1.0	Moderately Developed
Skating Trail Connection	Cross Country Ski	0.4	Moderately Developed
Skating Loop	Cross Country Ski	0.3	Moderately Developed
Flint Rock Nature Trail	Snowshoe	0.5	Moderately Developed
Indian Marker Tree Trail	Snowshoe	0.7	Moderately Developed
Holy Schist MBT	Snowshoe	3.2	Lightly Developed

Trail Name	Trail Use	Length (Miles)	NR 44 Trail Development Standard
Basalt & Pepper MBT	Snowshoe	1.2	Lightly Developed
Chert Dip MBT	Snowshoe	1.2	Lightly Developed
Gneiss & Smooth MBT	Snowshoe	1.0	Moderately Developed
Overlode MBT	Snowshoe	3.9	Lightly Developed
Pokerville MBT	Snowshoe	2.1	Lightly Developed
Home Stretch MBT	Snowshoe	0.7	Lightly Developed

Other Recreation Facilities

Beyond trails and campgrounds, BMSP has a number of other facilities utilized for recreation. These facilities are shown in Table 2.6.

Table 2.6. Other Recreation Facilities at Blue Mound State Park

Recreation Facility	Description
Adirondack Shelter	A small three-sided shelter in the Bike/Hike Campground.
Aquatics Center	Pool, splashpad and associated changing room facilities.
Campground Toilet/Shower	Flush toilet and shower building at the Family Campground.
Contact Station Woodshed	Area where park visitors may purchase firewood.
East Observation Tower	A 40-foot tall observation tower on the east side of the mound top.
Friends Shelter	Indoor gathering facility with flush toilets and heating and air conditioning. The building serves as a winter warming shelter, meeting and interpretive facility.
Main Shelter	Open shelter located on the top of Blue Mound.
Nature Center	Interpretive center for park educational programs.
Outdoor Amphitheatre	Outdoor gathering venue used for educational programs.
West Observation Tower	A 40-foot tall observation tower on the west side of the mound top.

Administrative

Support Facilities

Facilities that support BMSP operations are shown in Table 2.7.

Table 2.7. Administrative and Support Facilities

Support Facility	Description
Service Garages	Storage and maintenance facility for BMSP and Military Ridge State Trail equipment.
Park Entrance Visitor Station	Park office and visitor information center. Includes restrooms, interpretive materials and self-registration station.

Land Use and Partner Agreements

The Friends of Blue Mound State Park (FOBMSPP) is a charitable organization dedicated to supporting and assisting DNR in providing recreational, interpretive, scientific, historical, educational and related visitor services. The volunteers of FOBMSPP play a valuable role in the park's success through their donation of time and financial resources. FOBMSPP and DNR have a formal Friends group partnership.

Mountain bike trails at BMSP are largely built and maintained by the nonprofit Capital Off Road Pathfinders (CORP). CORP and DNR have a memorandum of understanding defining their partnership.

The Blue Mound Nordic Ski Club provides ski patrol, first aid and first responder services in the winter and sponsors park events throughout the year.



Image 2.3. Playground in the Family Campground. Photo by Kevin Swenson, DNR.

PROPOSED PROPERTY MANAGEMENT

This section describes the proposed management and development at BMSP. The section begins with a description of management that applies to the entire property, then describes management specific to each management area. Map F shows management areas and their associated NR 44 land management classifications.

PROPERTY-WIDE MANAGEMENT

The following management applies to all management areas within Blue Mound State Park. Objectives and prescriptions specific to each management area are described further in the management area sections of this chapter.

PROPERTY GOALS

The goal of proposed management described in this chapter is to:

- Provide outdoor recreation opportunities and modern facilities that connect visitors to the park's natural, scenic setting at the highest point in southern Wisconsin.
- Sustain the park's high-quality ecological resources.
- Contribute to the local and regional economies through management of sustainable recreational opportunities.
- Acquire lands that would protect resources, promote biodiversity, provide user access, and satisfy recreational needs of present and future generations.

PROPERTY MANAGEMENT

Common Elements

DNR properties, while diverse in the resources and recreation they offer, are governed under the same state statutes, administrative codes and processes. Additionally, DNR utilizes many standard practices in its management of habitat and public use of properties. Given this, the department has developed a set of Common Elements, or documents describing standard management practices commonly used by the department that apply broadly to many situations addressed in master plans. Common Elements are cited throughout this chapter to apply standard department management practices to Blue Mound State Park. More information on using Common Elements, and all Common Elements documents, are available on the [DNR Property Planning website](#).

General Management and Uses

General administrative management of Blue Mound State Park and its operations largely follows standard DNR operating procedures. This general management section includes the management plan for roads at BMSP as required under s. 23.116, Wis. Stats. The department does not manage use of roads owned, eased, or operated by other governmental units, including townships, but may work with these local units as partners to manage for shared goals.

DNR-owned lands are open to traditional outdoor recreational uses including hunting, fishing, and trapping except in refuges or other areas posted as closed. See Map H for hunting and trapping areas in BMSP. Other activities allowed throughout DNR lands include wildlife viewing, photography, hiking, paddling, cross-country skiing, snowshoeing, collection of wild edibles, and nature study. Edible fruits and nuts, wild mushrooms, wild asparagus, and watercress may be removed by hand without a permit for personal consumption by the collector. However, collection of seeds, roots, or other plant parts is prohibited.

Foot travel, including skiing (non-groomed) and snowshoeing is allowed on all department lands, service roads, dikes, berms, and firebreaks unless otherwise noted. Areas closed to foot travel may include closed easements, or areas temporarily restricted during habitat management activities, such as timber cutting or prescribed burns, due to safety concerns.

Motorized vehicle access is available on designated public access roads and parking areas. **Snowmobiles are allowed only on trails and routes designated for their use.** Allowances exist for motorized use by individuals with mobility impairments under the power-driven mobility device regulations of the Americans with Disabilities Act. For more information on these allowances, please refer to the 'Disabled Accessibility' paragraphs in the [General Property Management - Property Access Common Element](#). Information on rules governing public use of department-owned lands is found in Chapter NR 45 of the Wisconsin Administrative Code.

General Management Prescriptions

Apply the following prescription for general property administration.

- Follow the [General Property Management – Resource Management](#), [General Property Management – General Administration](#) and [General Property Management – Property Access](#) Common Elements.
- Maintain current parking lots and develop one new parking lot near the Family Campground as shown on Map C. Parking lot surfacing may be determined by the property manager in a manner consistent with maintenance needs given lot capacity and use level. Additional parking facilities, surfaced with native or other materials, may be constructed commensurate with park visitation needs at the discretion of the property manager.
- Maintain roads at the development level and public use status shown on Map C. Develop a fully developed, closed road for maintenance vehicle access as shown on Map C. New, lightly to fully developed roads may be developed in, or to access, areas acquired after the passage of this plan following public review of any proposed permanent roads.
- Establish temporary primitive to moderately developed (per NR 44.07(3)) roads as necessary to complete management activities. Following completion of timber or other management, conduct restoration activities to rehabilitate temporary roads to as natural of conditions as feasible, utilizing active and passive management techniques. Place emphasis on restoring temporary roads to natural conditions near public use areas such as trails and day use areas.

Real Estate Management

An overview of the department's real estate program and description of real estate management and master planning is provided in the [Real Estate Management Common Element](#). The Real Estate Management Common Element includes information on land acquisition and sales; easements, access permits, and land use agreements; payment in lieu of taxes; project boundaries; acquisition authority and acquisition goals.

Real Estate Management Prescriptions

- Modify the BMSP project boundary as shown on Map G. Increase the Blue Mound State Park acquisition authority by 1,100 acres to match the net change in project boundary acres.
- Support increasing the amount of public land block in the Blue Mound area by supporting county acquisition of lands, especially within the Blue Mounds Natural Resources Area established by Dane County.

Public Use and Recreation Management

Public Use and Recreation Objectives

- Provide high quality opportunities for day use outdoor recreation activities including picnicking, swimming, and trail-based recreation.
- Provide opportunities for family, group and hike-to and bike-to camping.
- Provide facilities for public gatherings and events.



Image 2.4. Main shelter on the top of Blue Mound. This plan proposes building a second shelter similar to this to serve additional users. Photo by Kevin Swenson, DNR.

Public Use and Recreation Prescriptions

General Facilities, Day Use Areas and Buildings

- Maintain current buildings shown in Table 2.6 and Table 2.7.
- Construct an open pavilion shelter near the West Tower.
- Remove the fence and other infrastructure in and around the wetland north of the Friends shelter as feasible given public safety and funding considerations.
- Maintain the pool and splashpad facilities following necessary policies and procedures for aquatics facilities.

- Maintain East Tower and West Tower for public access as feasible. If observation towers must be closed due to public safety considerations or other program decisions, repair or take down towers as necessary. If a tower is taken down, rebuild in a location designated as suitable by the department, as feasible given funding, public input and department policy. The department shall make the final determination to close, take down or rebuild any tower.

Camping

- Maintain the Family Campground as a modern campground per NR 44.07 (7)(e)5.b., Wis. Admin. Code. As feasible, and consistent with park visitor needs, add up to 50 additional auto-accessible sites to the Family Campground within the area shown on Map E. In conjunction with developing additional Family Campground sites, close or modify existing Family Campground sites to ensure compliance with site design and spacing standards and to provide a sense of privacy at campsites.
- As necessary and feasible given visitor demands, add electrical receptacles to campsites in the Family Campground up to levels compliant with s. 27.01(15)(b), Wis. Stats.
- Maintain the Bike/Hike Campground as a rustic campground per s. NR 44.07(7)(e)4.b., Wis. Admin. Code. Add up to ten additional campsites to the Bike/Hike Campground within the area shown on Map E. Maintain all sites as hike-to or bicycle-to only.
- Develop one to two auto-accessible, modern group campsites in the area shown on Map E. Group camp amenities, including a pavilion, toilets, and other facilities common to department group camp areas may be provided. Develop a connector trail from the group camp to the recreational trail system.

General Trails Management

- Maintain a system of recreational trails as shown on Map E. Small modifications to the nonmotorized trail alignment may be made to enhance trail sustainability and usability. Modifications may not cause the trail to deviate more than 0.25 miles from the alignment shown on Map E without public input. Changes to enhance trail sustainability and usability that cause the trail to deviate more than 0.25 miles from the alignment shown on Map E may be made after the public has been given the opportunity to submit input on proposed changes. Consult with the property manager and state park ecologist prior to adjusting trail alignment.
- New trails authorized in this plan shall be primitive to moderately developed.
- Develop trails up to the NR 44 development level shown in Table 2.5 and described in ch. NR 44.07 (3), Wis. Admin. Code.
- All trails shall be signed with the allowable seasonal uses. The property manager may adjust the designated uses, or modify uses, on existing and proposed trails to meet changes in use demand. Modifications to trail use shall be only for nonmotorized uses or bicycles equipped with electric motors. The public shall have the opportunity to submit input prior to adoption of trail use changes.
- In general, pedestrian and bicycling trail uses should be routed in opposite directions, when feasible, on shared trail loops.

- Existing nonmotorized trails shown on Map D but not on Map E (proposed future trails), shall be closed and restored to natural conditions when the property manager determines construction of new, replacement segments is complete.

Cross-Country Skiing

- Provide a system of lightly to moderately developed cross-country ski trails as shown on Map E, primarily providing a classical cross-country skiing experience. The property manager may adjust trail grooming to meet visitor needs.
- Install educational signs and displays to encourage visitors to follow trail etiquette and comply with NR 45 by refraining from hiking or snowshoeing on groomed cross-country ski trails.

Bicycling

- Work with partners to provide a system of single-track mountain biking and winter biking trails as shown on Map E. Newly developed trails shall be primitive to lightly developed, except where shared use trails require up to moderately or fully developed trails.
- At the discretion of the property manager, and following an opportunity for public input, Class 1 electric bicycles as defined in s. 340.01 (15ph)(a), Wis. Stats. may be allowed on mountain bike trails on department lands. This draft plan proposes allowing Class 1 electric bicycles on all mountain bike trails, at speeds of less than 15 miles per hour while the motor is engaged. Class 2 and Class 3 electric bicycles are not be authorized for use on any bicycle trails on the property.
- Establish a construction and maintenance agreement with a partner for the bike trail system. Consultation between property manager and partners shall occur to determine priority areas for constructing new trails and closing trails that are not shown on Map E. The property manager shall be consulted prior to and approve of any trail construction.
- Explore development of a mountain bike trail connection with Brigham County Park. Work with partners to construct trail connection if feasible and if written support is received from Dane County.

Hiking and Snowshoeing

- Maintain and sign the system of hiking and snowshoeing trails as shown on Map E. Develop trail maps and signs that reflect desirable snowshoeing loops with clear beginning and end points at established trailheads.
- Construct and maintain a lightly developed hiking trail through the lagoon wetland present north of the Friends Shelter as shown on Map E. The trail may include boardwalk facilities as appropriate.
- Encourage trail etiquette on shared snowshoeing/mountain biking trails by discouraging trail users from walking on groomed winter mountain biking trails without snowshoes at times when the trail base may be easily degraded.
- Work with partners to establish a portion of the potential Driftless Trail at BMSP. Seek public input prior to constructing any new trails for Driftless Trail purposes.

Hunting and Trapping

- Following the closure of the mountain bike trail segment north of Ryan Road and east of Mounds Park Road, adjust areas open to hunting and trapping during designated seasons as shown on Map H. Ensure proper signage clearly marking those areas open and closed to hunting is present.
- As feasible, and in compliance with department policy, allow hunting on additional property acquired by the department.

Snowmobiling

- Work with partners to develop and maintain a lightly developed snowmobile trail (per NR.44.07(3)) as shown on Map E. The trail may be constructed up to 12-feet in width. Existing infrastructure should be utilized wherever possible and feasible.
- Prior to opening trail, develop appropriate speed limits and work with partners to post speed limits and other appropriate safety signage within and adjacent to BMSP.
- When the snowmobile trail on Map E is open for use, discourage snowmobile riding along the portions of Mounds Park and Ryan roads that are not part of the snowmobile corridor shown on Map E. Snowmobile trail infrastructure and maintenance, including trail grooming, is limited to the designated trail shown on Map E. Work with Dane County and other partners to show the trail on Map E on county snowmobile trail maps. In the event the trail on Map E is no longer viable due to infrastructure or other management concerns identified by the department, a snowmobile route along Mounds Park and Ryan roads may be maintained in accordance with state statutes and department policy. If the snowmobile trail on Map E is no longer viable, a different trail corridor may be identified and developed following a master plan variance process (ch. NR 44.04(1)(d), Wis. Admin. Code).
- Ensure erosion management practices are included in snowmobile trail construction and maintenance agreements. Consideration should be given to protection of existing and newly constructed water management facilities, especially on sloped surfaces. Ensure contract language considers alternate trail grooming options or prohibits grooming on vulnerable trail sections if water management structures may be impacted.
- The snowmobile trail shown on Map E is intended to serve as a snowmobile connection between the Military Ridge State Trail and county trail systems north of the park. The snowmobile trail within BMSP may be closed to snowmobile use if the department determines this connection is no longer viable.

Natural Resources Management

The landscape of Blue Mound State Park is predominantly forested, with areas of grassland present. Current management of this landscape is largely passive with some active management to control invasive species and protect visitor safety. This plan proposes more active management practices to maintain the ecological health of the property and continue to provide habitat for the park's many resident species of plants and wildlife. Natural resources management that applies broadly across the park is described in

this property-wide section. Management for specific areas of the park (management areas) is described beginning on page 25.

Land Cover and Habitat Classifications

The department uses different classification systems and data sources to describe and estimate land cover on DNR properties and to plan and perform habitat management activities. The habitat classification system used for master planning is described in the [Habitat Classifications used in Master Plans Common Element](#). Table 2.8 shows the current land cover at BMSP as well as the projected long-term land cover that may result from the natural resources management proposed in this plan. Table 2.8 does not account for any areas that may be acquired in the future. Existing land cover is also depicted on Map J.

Table 2.8. Current and Projected Land Cover at BMSP

Land Cover	Current GIS Acres	Current Percent Land Cover	Projected Acres*	Projected Percent Land Cover*
Upland Deciduous Forest	867	76	687	60
Upland Coniferous Forest	17	2	11	1
Upland Shrub	37	3	0	0
Oak Woodland	0	0	195	17
Upland Grass	83	7	92	8
Developed	141	12	160	14

*Projected acreages are estimates based on conditions expected if management described in this chapter is fully implemented.

Forest Certification

The land management classifications listed in Table 2.9 reflect that all DNR-managed lands, including state parks, fishery areas, wildlife areas and natural areas have been audited by an independent third party to the Forest Stewardship Council® and Sustainable Forestry Initiative® forest management standards (license codes FSC®C006979 and SFI®-00059) and are recognized as being well managed. These certifications emphasize the state's commitment to responsible management and conservation of its forestlands that support economic activities, protect wildlife habitat and provide recreational opportunities.

Natural Resource Objectives

- Provide high-quality wildlife habitat while providing a safe, aesthetically pleasing natural setting for outdoor recreation.
- Sustainably manage and conserve natural community areas in the park in conjunction with meeting the public use needs of the park.

Natural Resource Prescriptions

- Where compatible with public use and recreation objectives, follow the [General Forest Management](#), [General Wildlife Management](#) and [General Fisheries Management](#) for coldwater fisheries Common Elements.
- In forested areas of high public use, such as along trails and in campgrounds, manage for large trees and a healthy tree canopy. Remove hazardous trees.
- Following a catastrophic event, such as wind, fire, ice, or forest pest damage, salvage tree harvests may be completed following consultation between the property manager, district park supervisor, district ecologist, state parks ecologist, wildlife biologist and forester. Place emphasis on aesthetics and visitor safety when planning and conducting salvage operations.
- As feasible and in conjunction with other timber and habitat management, reduce the red maple component. In areas transitioning to sugar or red maple, favor sugar maple.
- Monitor and control invasive and pest species, especially ch. NR 40, Wis. Admin. Code prohibited species and other invasive species. Follow property specific species management plans and department protocol for managing invasive species. Invasive species management techniques may include the use of prescribed fire and herbicides.
- When feasible, establish visual buffers between timber harvest areas and designated use areas, including roads and trails. Use aesthetic enhancement techniques when establishing buffers.
- Use berms, boulders or other techniques to limit public use of closed trail sections. Rehabilitate closed trail sections to natural cover types using passive and active management techniques.



Image 2.5. View from the John Minix trail. Photo by Katie Godding, DNR.

Management Areas and Land Management Classifications

Land Management Classifications

All department lands must be assigned a land management classification per NR 44. These classifications for a property or management area within a property are determined during the master planning process. Potential land management classifications the department may use are described in ch. NR 44.06, Wis. Admin Code.

Management areas and their classifications defined in this plan are mapped to proposed project boundaries (Map F). This ensures parcels purchased within a project boundary after this plan's approval have management objectives assigned. Those parcels purchased after this plan's approval and falling outside a management area will be assigned a land management classification following the process described in NR 44.

This plan proposes establishing five management areas within Blue Mound State Park, as shown in Table 2.9 and on Map F. All five are proposed to be designated as Recreation Management Areas (NR 44.06(8)), each with a recreational use setting subclassification of either Type 3 or Type 4. See ch. NR 44.07, Wis. Admin. Code for a description of recreational use setting subclassifications.

Table 2.9. Proposed Land Management Classifications

Proposed Management Area Name	Proposed Land Management Classification	Proposed Recreational Use Setting Subclassification	Acres*
Area 1: Day Use and Camping	Recreation Management Area	Type 4	180.7
Area 2: Oak Woodland and Prairie	Recreation Management Area	Type 3	449.6
Area 3: Pleasure Valley Hardwoods	Recreation Management Area	Type 3	194.7
Area 4: Central Hardwoods Succession	Recreation Management Area	Type 3	200.2
Area 5: Oak Management	Recreation Management Area	Type 3	1,452.8

*Acreages shown were calculated using GIS software. Areas that are part of the proposed project boundary expansion are assigned a proposed land management classification. That acreage is accounted for here.

Each management area follows the property wide management described beginning on page 17, as well as unique objectives and prescriptions for the area described in the following sections.

Management Area 1: Day Use and Camping

Classification: Recreation Management Area

Recreational Use Setting: Type 4

Size: 181 Acres (GIS Acres)

The Day Use and Camping management area contains many of the park's developed facilities including the park entrance and visitor station (PEVS), Family and Bike/Hike campgrounds, the Friends Shelter, pool and splashpad, trailheads and observation towers. The majority of park users encounter this management area when they visit BMSP. The Pool and Trailhead Day Use Area draws many visitors throughout the year as trailheads for mountain biking, cross-country skiing and hiking are all present. The Friends Shelter in this management area serves as a warming shelter and meeting facility. All current and proposed camping occurs within this management area.

Table 2.10 shows the current land cover within this management area. The area is primarily managed for public use, safety and aesthetics. That management is proposed to continue. Most of the area is in the Developed Habitat Classification and managed for public use and safety and aesthetics. That management is proposed to continue. Some increase in development is likely to occur as the Family Campground expands and the group camp is developed (see Table 4.1, page 59 for estimates of cleared, graded acres).

Most resource management is focused on creating a natural setting that enhances visitors' outdoor recreation experience. Some opportunities for minor habitat management exist, such as potential for pollinator habitat installation near the PEVS, Friends Shelter and Bike/Hike Campground.

Table 2.10. Day Use and Camping Management Area Land Cover

Habitat Classification	Acres	% Cover
Upland Deciduous Forest	19	11
Upland Coniferous Forest	5	3
Upland Grass	5	3
Developed	140	83

Area Management

Apply property-wide management (page 17) in addition to objectives and prescriptions for this management area.

Public Use and Recreation

Public Use and Recreation Objectives

- Maintain a developed recreational and administrative use area that provides opportunities for public gathering and camping while facilitating trail-based recreation.

Public Use and Recreation Prescriptions

- Maintain trailhead facilities for biking, hiking and cross-country skiing. Provide amenities for trail users, such as bike wash stations, as appropriate and commensurate with visitor needs.



Image 2.6. Friends Shelter at BMSP. Photo by Phil Rynish, DNR.

- Maintain the Friends Shelter and Mound Top Day Use areas as modern day use areas as described in NR 44.07(7)(e)5.c. Additional vault or flush toilet facilities, water sources, play equipment, pavilions or other facilities typical of department day use areas may be constructed as necessary and feasible given visitor needs.
- Maintain the turf grass field in the Mound Top Day Use Area to serve as an open recreation area for park visitors and as an overflow parking area during major public events.
- Scenic overlooks within the Mound Top Day Use Area may be maintained or closed, or new overlooks created, at the discretion of the property manager.

Natural Resources Management

Natural Resource Objectives

- Provide a safe, aesthetically pleasing natural setting primarily for public day use and camping activities.

Natural Resource Prescriptions

- Manage for large trees and healthy canopy where practical and feasible.
- Maintain and enhance vegetative screening in campground areas to promote a sense of seclusion.
- Manage vegetation, by trimming trees and creating clearings, to allow for scenic lookouts around the observation towers and in other high elevation areas of the park, as directed by the property manager.
- Increase structural and compositional diversity in Conifer Plantation 1 (see Map J) using extended rotation and big tree silviculture techniques described in the silviculture handbook (HB2431.5).
- Where practical and feasible, provide and maintain pollinator habitat areas, especially in areas with opportunity for public education such as near the PEVS, Friends Shelter and Bike/Hike Campground.

Management Area 2: Oak Woodland and Prairie

Classification:	Recreation Management Area
Recreational Use Setting:	Type 3
Size:	450 Acres (GIS Acres)

The Oak Woodland and Prairie Management Area is primarily on the south slope of Blue Mound. The management area contains a number of single-track mountain and fat tire biking trails, including the Pokerville trail. Hikers enjoy the Walnut Hollow trail and Ridgeview trail and, when adequate snow is present, cross-country skiers utilize these trails as a portion of the Blue Loop. The Orange Loop for cross-country skiing is also in this management area.

Land cover within this management area is largely oak forest and grassland (Table 2.11). Several conifer plantations are also present. Historically, the grasslands have been more actively managed than the forested areas. Several prescribed burns have been conducted in the grasslands to control invasive species and shrubs and encourage growth of native plant species. Management of forested areas has typically been more passive.



Proposed management in this area would allow for more targeted habitat conditions to be created and

Image 2.7. Overlode Mountain Bike Trail where it crosses Ryan Creek in the Pleasure Valley Hardwoods Management Area. Photo by Phil Rynish, DNR.

maintain an oak component while continuing to facilitate outdoor recreation. As is the case throughout BMSP, much of the oak forest in this area is aging and beginning to convert to central hardwoods cover types. The strong presence of white oaks in this area presents an opportunity to manage for a transition from oak woodland to oak opening to open grasslands. Both the Southwest Savanna and the Western Coulees and Ridges ecological landscapes are considered important places to manage for oak woodland and oak opening natural communities. Conifer plantations in this management area are of declining quality and present an opportunity to provide more beneficial habitat. Proposed management would convert Conifer Plantations 2 and 3 (see Map J) to other natural cover types (likely oak savanna or grassland) while managing Conifer Plantation 4, which is bisected by the Orange Loop ski trail, for larger conifer trees with more species diversity mixed in.

Table 2.11. Oak Woodland and Prairie Management Area Land Cover

Habitat Classification	Acres	% Cover
Upland Deciduous Forest	224	71
Upland Coniferous Forest	13	4
Upland Shrub	1	<1
Oak Opening/Oak Woodland	0	0
Upland Grass	75	24
Developed	3	1

Area Management

Apply property-wide management (page 17) in addition to objectives and prescriptions for this management area.

Public Use and Recreation Management

Follow the property-wide Public Use and Recreation Management on page 19.

Natural Resources Management

Natural Resource Objectives

- Where feasible, manage the area for a continuum from oak forest to oak savanna to grassland.
- Maintain and enhance the natural appearing character of the management area, especially near recreational facilities.

Natural Resource Prescriptions

- Follow the Oak and Oak-dominated Mixed Forest and Oak Savanna (Oak Opening and Oak Woodland) Common Elements to create and maintain areas of transition from oak forest to savanna to prairie. Timber management may also be used to manage for these cover types. Maintain prairie and grassland areas following the Surrogate Grasslands Common Element.
- Utilize passive and active management techniques authorized in the Oak and Oak-dominated Mixed Forest and Oak Savanna (Oak Opening and Oak Woodland) Common Elements to convert non-oak cover types present in the management area to oak cover types.
- In forested areas, manage for large trees and shade along trails.
- Where possible and practical, utilize visual screening techniques when conducting management activities near trails or other areas of high public use.
- Convert aspen stands to a different native forest cover type such as oak or central hardwoods utilizing commercial timber harvest or other active management techniques in the [Aspen Common Element](#).
- Following the [Conifer Plantation Common Element](#), convert Conifer Plantations 2 & 3 (Map J) to other native cover types. Increase structural and compositional diversity in Conifer Plantation 4 (Map J) using extended rotation and big tree silviculture techniques described in the silviculture handbook (HB2431-5).

Area 3: Pleasure Valley Hardwoods

Classification: Recreation Management Area

Recreational Use Setting: Type 3

Size: 195 Acres (GIS Acres)

The Pleasure Valley Hardwoods management area encompasses the area popularly known as Pleasure Valley, the lowest point in the park, and several northern hardwoods stands outside of the valley. The Pleasure Valley area has historically hosted a number of activities including a ski jump and a snowmobile trail. In today's BMSP, the Weeping Rock Hiking Trail and the Overlode Mountain Biking Trail are within this management area. Hikers also use the Overlode trail to access Brigham County Park on BMSP's eastern border.

Land cover (Table 2.12) is predominantly forested, though a small remnant prairie is present near the border with Brigham County Park. The valley itself is almost entirely composed of the northern hardwoods cover type. Aspen and some oak stands are also present in the management area. Past resource management has primarily been passive. This plan proposes management that will encourage large tree growth and old forest characteristics to form over time.

Table 2.12. Pleasure Valley Hardwoods Management Area Land Cover

Habitat Classification	Acres	% Cover
Upland Deciduous Forest	177	96
Upland Shrub	6	3
Upland Grass	2	1

Area Management

Apply property-wide management (page 17) in addition to objectives and prescriptions for this management area.

Public Use and Recreation

Follow the property-wide Public Use and Recreation Management on page 19.

Natural Resources Management

Natural Resource Objectives

- Maintain deciduous forest habitat, primarily composed of northern hardwoods and oak cover types, with old forest characteristics where feasible. Maintain management area as part of a large forest block that provides habitat for forest interior species.
- Maintain a small remnant prairie near the BMSP boundary with Brigham County Park.

Natural Resource Prescriptions

- Promote old forest characteristics in northern hardwoods stands following the managed old growth techniques described in the old growth handbook (HB2480-5) and big tree silviculture

techniques described in the silviculture handbook (HB2431-5). As feasible, and in consideration of public use and safety within the management area, retain standing snags and increase coarse woody debris to improve wildlife habitat.

- As feasible, maintain oak as long as possible and manage passively to allow for natural succession to other native cover types except to remove hazard trees.
- In combination with Management Area 4 and Management Area 5, maintain a total canopy cover consistent with forest interior bird habitat requirements. Reference relevant forest interior bird species guidance documents and consult with the state park ecologist, district ecologist, forester, wildlife biologist and property manager prior to planning and conducting timber harvest activities.
- Convert aspen stands to a different native forest cover type such as oak or northern hardwoods utilizing commercial timber harvest or other active management techniques in the [Aspen Common Element](#).



Image 2.8. Former service road through Pleasure Valley Hardwoods Management Area. This path is proposed to serve as a snowmobile trail when county snowmobile trail systems are open. Photo by Phil Rynish, DNR.

Area 4: Central Hardwoods Succession Area

Classification: Recreation Management Area

Recreational Use Setting: Type 3

Size: 200 Acres (GIS Acres)

The Central Hardwoods Succession Management Area is primarily a forested area interspersed with recreational trails. Mountain biking, hiking and cross-country skiing all occur within this area. One of the park's larger wetland areas occurs here and is proposed to provide a boardwalk hiking opportunity.

The land cover (Table 2.13) is predominantly oak, with multiple patches of upland shrub. Small wetland seeps are also present throughout the management area. The oak stands are past biological maturity. Oak regeneration efforts are unlikely to be successful here, and thus proposed management may keep the oak component of this management area as long as possible while allowing natural succession to central hardwoods to occur. Given the relatively high public use, resource management will focus on encouraging growth of large trees and public safety. The proposed management in this area is less active than in other areas of the park.

Table 2.13. Central Hardwoods Succession Management Area Land Cover

Habitat Classification	Acres	% Cover
Upland Deciduous Forest	171	85
Upland Shrub	29	15

Area Management

Apply property-wide management (page 17) in addition to objectives and prescriptions for this management area.

Public Use and Recreation

Follow the property-wide Public Use and Recreation Management on page 19.

Natural Resources Management

Natural Resource Objectives

- Provide deciduous forest habitat, primarily composed of mixed-age central hardwoods and oak cover types. Maintain management area as part of a large forest block that provides habitat for forest interior species.

Natural Resource Prescriptions

- Follow the [Oak and Oak-dominated Mixed Forest](#) and [Central Hardwoods](#) Common Elements. Maintain oak component as long as possible but remove hazardous trees and allow for conversion to central hardwoods cover types. As feasible, and in consideration of public use and safety within the management area, retain standing snags and increase coarse woody debris for habitat purposes.

- Promote large trees using big tree silviculture techniques described in the silviculture handbook (HB2431-5), especially in central hardwoods stands.
- In combination with Management Area 3 and Management Area 5, maintain a total canopy cover consistent with forest interior bird habitat requirements. Reference relevant forest interior bird species guidance documents and consult with the district ecologist, parks ecologist, forester, wildlife biologist and property manager prior to planning and conducting timber harvest activities.
- Convert upland shrub areas to forested cover types using active management techniques such as mowing/brushing, prescribed fire, pesticide treatments and tree plantings.



Image 2.9. Bloodroot at BMSP. Photo by Craig Anderson, DNR.

Area 5: Oak Management Area

Classification: Recreation Management Area

Recreational Use Setting: Type 3

Size: 1,453 Acres (GIS Acres)

Area 5 encompasses forested areas on the north and west slopes of Blue Mound, as well as most of the areas in the proposed project boundary expansion, which accounts for much of the acreage in this management area. The management area covers areas farther from the park's heavily used day use areas and has fewer recreational facilities than other areas of the park. Holy Schist Mountain Bike Trail is the primary recreational trail within the management area. The land cover (Table 2.14) is almost entirely oak-dominated forest. As in other portions of the park, the oak in this management area is aging and some areas are beginning to succeed to central hardwoods with large components of red and sugar maple and other species associated with the central hardwoods cover type.

Proposed management for this area is intended to retain and regenerate the oak cover type, an important component of BMSP's ecology.

Table 2.14. Oak Management Area Land Cover

Habitat Classification	Acres	% Cover	Projected % Cover
Upland Deciduous Forest	272	99	100
Upland Shrub	1	1	0

Area Management

Apply property-wide management (page 17) in addition to objectives and prescriptions for this management area.

Public Use and Recreation

Follow the property-wide Public Use and Recreation Management on page 19.

Natural Resources Management

Natural Resource Objectives

- Provide deciduous forest habitat, primarily composed of mixed-age central hardwoods and oak cover types. Maintain management area as part of a large forest block that provides habitat for forest interior species.

Natural Resource Prescriptions

- Follow the [Oak and Oak-dominated Mixed Forest](#) and [Central Hardwoods](#) Common Elements. As feasible, use active management techniques, including prescribed fire and timber management, including commercial harvest, to encourage oak regeneration. In areas where oak regeneration is not feasible, maintain oak component as long as possible and manage for natural succession to

central hardwoods. As feasible, and in consideration of public use and safety within the management area, retain standing snags and increase coarse woody debris for habitat purposes.

- In combination with Management Area 3 and Management Area 4, maintain a total canopy cover consistent with forest interior bird habitat requirements. Reference relevant forest interior bird species guidance documents and consult with the state park ecologist, district ecologist, forester, wildlife biologist and property manager prior to planning and conducting timber harvest activities.
- Where possible and practical, utilize visual screening techniques when conducting management activities near trails or other areas of high public use.



Image 2.10. A cross-country ski trail that forms the border of the Oak Management Area on a foggy winter day. Photo by Phil Rynish, DNR.

CHAPTER 3 : REGIONAL AND PROPERTY ANALYSIS

OVERVIEW

This chapter presents background ecological, recreation opportunity and socioeconomic information on the region surrounding Blue Mound State Park to provide the regional context for management described in Chapter 2.

ECOLOGICAL CHARACTERISTICS AND OPPORTUNITIES OF THE BLUE MOUND STATE PARK REGION

DNR has adopted a classification system (based on the system developed by the U.S. Forest Service and many collaborators) to consistently organize its land-based ecological planning, management, and monitoring activities. This system divides the state into 16 ecologically distinct regions called ecological landscapes, based on soils, existing and pre-Euro-American settlement vegetation, topography, and types of aquatic features present. The majority of Blue Mound State Park is within the Southwest Savanna Ecological Landscape, with a small portion also within the Western Coulees and Ridges Ecological Landscape (Figure 3.1). This section utilizes these landscapes to describe ecological characteristics and opportunities in the BMSP region. Descriptions of natural resources, socio-economic characteristics and recreational resources for the Southwest

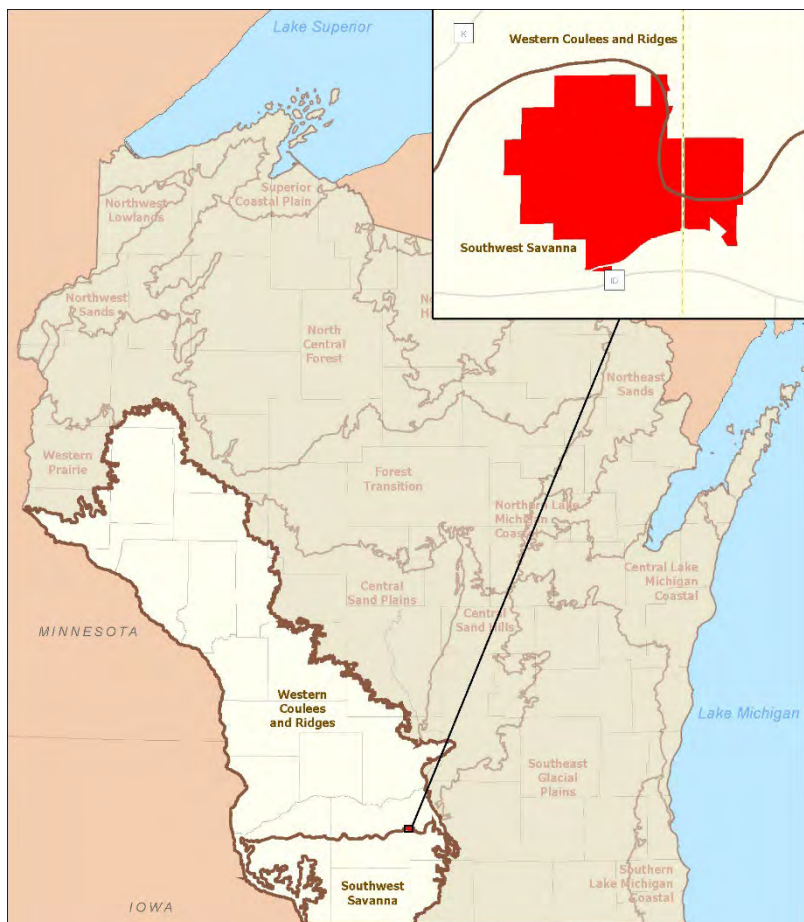


Figure 3.1. Ecological landscapes of Wisconsin. Blue Mound State Park sits on the edge of the Southwest Savanna and Western Coulees and Ridges ecological landscapes with portions of the park falling in each.

Savanna and Western Coulees and Ridges are provided in great detail in [Chapter 20](#) and [22](#), respectively, of the reference book *The Ecological Landscapes of Wisconsin*. Information regarding regional ecological characteristics draws heavily from those chapters, and they are incorporated by reference in this planning

document. More detailed information on the ecological conditions of BMSP can be found in the Blue Mound State Park Rapid Ecological Assessment (WDNR, 2015b).

Southwest Savanna

The Southwest Savanna Ecological Landscape (SWS) is 1,950 square miles in size, comprising 3.5% of the land area of Wisconsin. The region is among the warmest of the ecological landscapes – with the fourth longest growing season, second warmest January low temperature and third lowest snowfall of the ecological landscapes.

The SWS is part of Wisconsin's Driftless Area – an area defined by its lack of glaciation for at least the last 2.4 million years. Sedimentary bedrock, especially dolomites and sandstones, underlay much of the landscape. Soils are primarily silt loams, which are shallow in some areas with red clay subsoil or bedrock at or near the surfaces. Valleys contain alluvial sands, loams and occasional peats. Owing to its place in the Driftless Area, the Southwest Savanna primarily has a dendritic drainage pattern. Natural lakes are nearly absent, though some reservoirs have been developed (WDNR, 2015c).

Historically, the SWS was primarily tallgrass prairie and oak savanna. Oak forest was present in some slopes and draws. Today, most of the landscape (70%) is covered in agricultural crop production. Grassland, forest, and developed urban and residential areas comprise the remainder. The grasslands are primarily pasture, with prairie remnants persisting in areas poorly suited to agriculture. Pastures with scattered open-grown oaks still exist in some areas. These pastures mimic the historical oak savanna structure. Major forest types of the landscape are oak-hickory and maple-basswood (WDNR, 2015c).

Western Coulees and Ridges

The Western Coulees and Ridges Ecological Landscape (WCR) in southwestern and west central Wisconsin is characterized by its lack of glacial features. Like the SWS, the WCR is also part of the Driftless Area. The topography is unique in the state due to the long periods of erosion which have created dissected ridges, steep-sided valleys, and extensive stream networks with dendritic drainage patterns. The WCR is more forested than the rest of southern Wisconsin, including most of the SWS. Soils are mostly silt loams (loess) and sandy loams, over dolomite and sandstone bedrock. Several large rivers flow through or border the ecological landscape.

Historical vegetation of the WCR was more forested than the SWS and consisted of upland southern hardwood forests, oak savanna, and prairie, with extensive floodplain forests, sedge meadows, and marshes along the major rivers. With Euro-American settlement, most of the more level lands on ridge tops and in valley bottoms was cleared of native vegetation for agricultural uses. The steep slopes between valley bottom and ridge top, unsuitable for raising crops, either remained in forest or the former savannas and prairies grew up into oak- or maple-dominated forests after wildfires common prior to Euro-American settlement were suppressed. Today, forest is the largest land cover component of the region, making up over 40% of the WCR's land cover. Agriculture and grassland (mostly consisting of non-native species) make up most of the rest; wetlands are restricted almost entirely to the river valleys.

IMPORTANT ECOLOGICAL OPPORTUNITIES

Ecological opportunities are a broad category of interactive groupings of landforms, waterbodies, natural communities and other significant habitat for native plants and animals which usually occur at large scales. Those described here are drawn from the *Ecological Landscapes of Wisconsin* chapters to place BMSP in the broader context of the two ecological landscapes it occupies. Not all ecological opportunities present in the two landscapes occur in BMSP. The ecological opportunities described in this section represent those that BMSP may play a role in meeting.

Native Prairie Remnants and Grasslands

Grasslands and native prairies were identified as important management opportunities in both the SWS and WCR. One small remnant prairie and approximately 80 acres of grassland are present in BMSP.

Oak Ecosystem & Fire-adapted Vegetation Continuum: Prairie-Savanna-Woodland-Oak Forest

Both the SWS and WCR have important management opportunities for oak ecosystem and fire adapted vegetation continuums. In BMSP, the oak forests and grasslands present an opportunity to manage for this type of habitat continuum of forest, to open woodland to prairie. Additionally, the BMSP Rapid Ecological Assessment (WDNR, 2015b) identified prairie and oak savanna restoration as an ecological opportunity in the park.

Forests

The SWS and WCR chapters in the *Ecological Landscapes of Wisconsin* identify forests as important management opportunities. Forests within these landscapes are crucial habitats for a number of species, particularly wildflowers, forest interior breeding birds, and as stopover habitat for migrating birds. The BMSP Rapid Ecological Assessment (WDNR, 2015b) identified southern mesic and southern dry-mesic forest areas within the park. These forests are part of an extensive forested block that extends on to adjacent public and private lands.

Coldwater Streams

Coldwater streams were identified as important management opportunities within the WCR. The headwaters of Ryan Creek, a coldwater stream, are in the Pleasure Valley Hardwoods Management Area of BMSP.

IMPORTANT NATURAL COMMUNITIES

Natural Communities

The Ecological Landscapes of Wisconsin (WDNR, 2015c) lists the natural communities in the Southwest Savanna for which there are management opportunities. These are shown in Table 3.1 (which appears as Appendix 20.F in *The Ecological Landscapes of Wisconsin*). Bolded natural communities are present within Blue Mound State Park.

Table 3.1. Natural communities for which there are management opportunities in the Southwest Savanna

Major Opportunity	Important Opportunity	Present
Oak Opening	Southern Dry Forest	Floodplain Forest
Oak Woodland	Southern Dry-Mesic Forest	Cedar Glade
Dry Prairie	Hemlock Relict	Shrub-carr
Dry-Mesic Prairie	Pine Relict	Sand Prairie
Mesic Prairie	Wet-Mesic Prairie	Wet Prairie
Surrogate Grasslands	Dry Cliff (Curtis' Shaded Cliff)	Southern Sedge Meadow
Warmwater Streams	Coldwater Stream	Emergent Marsh
	Coolwater Stream	Submergent Marsh
		Ephemeral Pond
		Reservoir
		Warmwater River

Major opportunities mean the natural community can be sustained in the ecological landscape, either because many significant occurrences of the natural community have been recorded in that landscape or major restoration activities are likely to be successful in maintaining the community's composition, structure, and ecological function over a long period of time.

Important opportunities are those that although the natural community does not occur extensively or commonly in the ecological landscape, one to several occurrences are present and are important in sustaining the community in the state. In some cases, important opportunities may exist because the natural community may be restricted to just one or a few ecological landscapes within the state and should be considered for management there because of limited geographical distribution and a lack of better opportunities elsewhere.

Eight major native community management opportunities in the Western Coulees and Ridges occur in BMSP. Of those eight, four are distinct from major or important opportunities in the SWS:

- Ephemeral Ponds
- Shrub Carr, (present but limited extent in BMSP)
- Southern Mesic Forest
- Surrogate Grasslands, which are limited in the portion of BMSP that falls within the WCR (see Figure 3.1 and Map J).

PRIORITY HABITATS

DNR's Bureau of Wildlife Management (WM) in consultation with interdisciplinary teams of staff within the Fisheries Management, Natural Heritage Conservation, Office of Applied Science, Forestry, and Water Quality programs, developed a set of habitat priorities for the department. These priorities should be viewed as a means to focus department habitat management resources over the next five to ten years and are expected to be periodically re-examined as part of an adaptive management process. Due to limited resources, it is expected that most department habitat management resources will be focused on Priority 1 and 2 (out of 3) habitats.

The identification of priorities used broad habitat groupings, such as emergent marsh or remnant prairie. In some cases, the habitats were identified by life stage, such as young or old forest. These habitats were prioritized based on WM administrative districts. These districts were utilized because they are county-

based, which allows for efficient allocation of program resources. It is recognized that some priority habitats span these district boundaries and that some portions of the districts may not provide opportunities for management of priority habitats.

Criteria used in the prioritization process included:

- Number of species impacted
- Stakeholder benefit and interest, including recreation
- Importance to and presence of rare and listed species
- Cost/benefit
- Area sensitivity
- Time sensitivity of actions
- Relative amount of resources needed for adequate management

Table 3.2 shows the terrestrial, wetland and aquatic habitats that were rated as priority 1 for the Southern Wildlife Management District, which contains BMSP.

Table 3.2. Top DNR Habitat Priorities for the Southern Wildlife Management District

Terrestrial/ Wetland Habitats	BMSP Presence
Deep marsh/shallow lakes (hemi-marsh goal)	Not Present
Emergent wetlands (wet/sedge meadow-shallow marsh, mudflats)	Present - Very Limited
Oak Forest	Present
Oak savanna/woodlands	Present - degraded
Old forests (pine, relic hemlock, bottomland hardwoods, oak)	Present – Older oak
Remnant and planted prairie in historic prairie areas	Present
Aquatic Habitats	BMSP Presence
Coldwater Streams	Present
Coolwater Steams	Not Present
Large Lake - shallow, hard, seepage	Not Present
Lake Michigan	Not Present
Warmwater Rivers	Not Present

IMPORTANT ANIMAL AND PLANT SPECIES

Species of Greatest Conservation Need and Rare Plants

The Wisconsin Wildlife Action Plan (WWAP) (WDNR, 2015a) denotes Species of Greatest Conservation Need (SGCN). SGCN are animals that have low and/or declining populations that need 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.

There are 68 SGCN and 26 rare plants highly or moderately associated with the Southwest Savanna Ecological Landscape. This means that these species are significantly associated with the ecological landscape, and that restoration of natural communities with which these species are associated would significantly improve their conditions (WDNR, 2019b). Forty-two rare animal species and eighteen rare plant species are known to occur in or around BMSP. Figure 3.2 shows the number of SGCN and rare plants of the region associated with each natural community.

SPECIES LEVEL CONSERVATION OPPORTUNITIES

The BMSP Rapid Ecological Assessment (WDNR, 2015b) identified conservation opportunities within the park for the following groupings of species:

- Bats
- Forest Interior Birds
- Terrestrial Snails
- Grassland Shrub Birds



Image 3.1. The Rusty Patched Bumble Bee (Bombus affinis) is a federally listed endangered species. Blue Mound State Park is entirely within a high-potential zone for the species. Photo by Jay Watson, DNR.

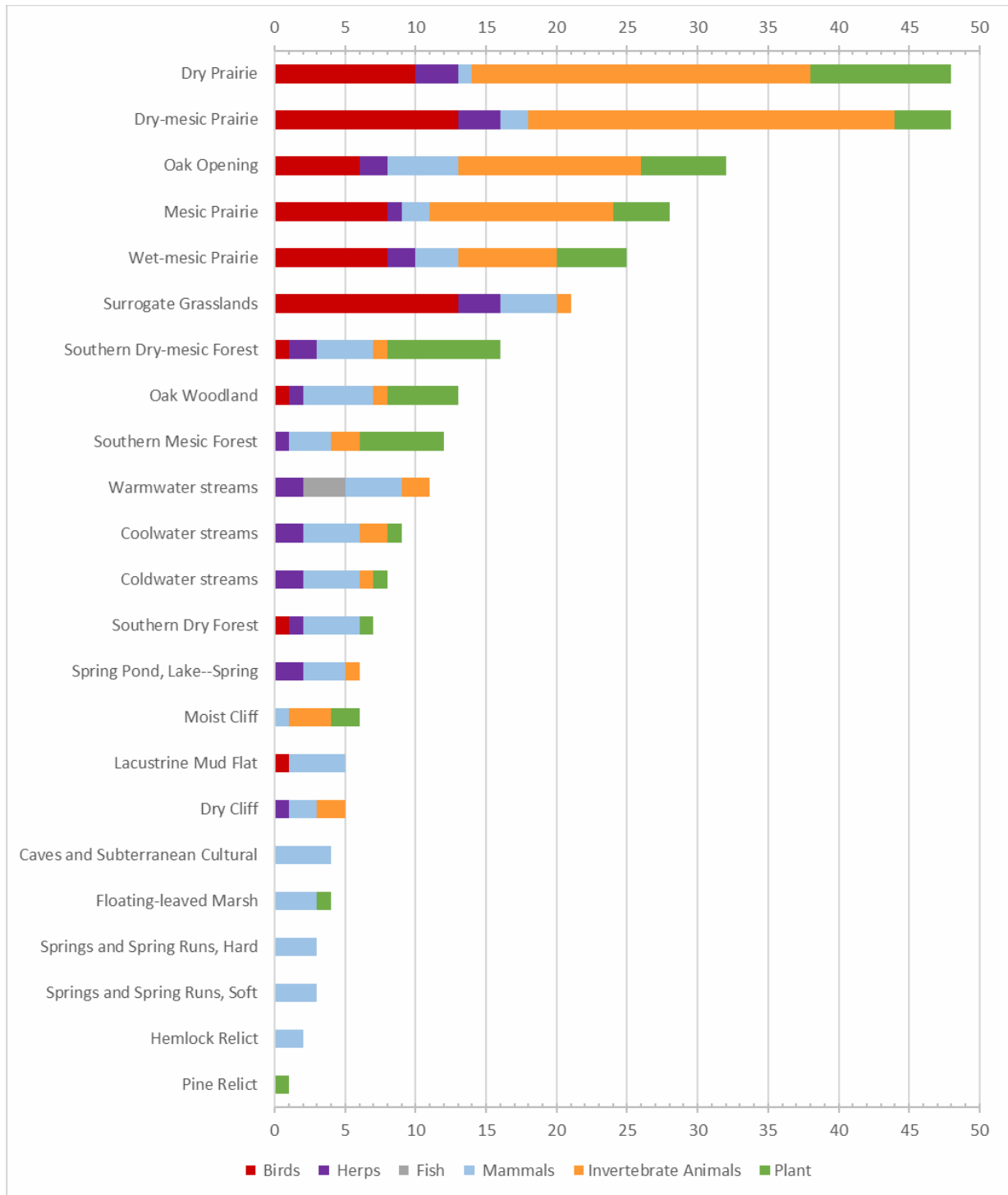


Figure 3.2. Number of SGCN and Rare Plants Highly or Moderately Associated with Natural Communities having Major or Important Opportunity in the Southwest Savanna

Since the publication of the BMSP Rapid Ecological Assessment (WDNR, 2015b), the rusty-patched bumble bee (RPBB) has been listed as federally endangered. As part of the federal listing, the United States Fish and Wildlife Service identified areas where the species is likely present, called high potential zones. BMSP is entirely within a high potential zone for RPBB.

Bats are a vital part of the ecosystem and play a role in controlling many pest insect species, including agricultural pests and biting insects. The onset of white-nose syndrome in Wisconsin has environmental, economic and public health implications. Suitable summer habitat for bats is present at BMSP (WDNR, 2015b).

IMPORTANT FISH & GAME SPECIES

White-tailed deer and turkey are popular game species pursuits in the SWS and WCR, including in and around BMSP. BMSP and the surrounding area hosts a large deer population that, due to over-browsing, can make regeneration of trees difficult among a host of other negative natural resources concerns. Trout and smallmouth bass are popular pursuits in the streams of the SWS and WCR.

OTHER IMPORTANT CONSERVATION FEATURES OF THE SOUTHWEST SAVANNA AND WESTERN COULEES AND RIDGES

Conservation Opportunity Areas (COAs)

In addition to identifying SGCN, the Wisconsin Wildlife Action Plan (WDNR, 2015a) also identifies areas on the landscape containing significant ecological features, natural communities or SGCN habitat for which Wisconsin plays a role in their conservation. The WWAP identifies these areas, referred to as [Conservation Opportunity Areas](#) (COAs) on a scale of ecological significance, ranging from global to state. COAs represent some of the best places to implement conservation actions recommended in the WWAP (WDNR, 2015a). There are three COAs in the SWS and 34 within the WCR (WDNR, 2017). Blue Mound State Park is not within a COA.

STATE NATURAL AREAS

State natural areas (SNAs) protect outstanding examples of Wisconsin's native landscape of natural communities, significant geological formations and archeological sites. While no State Natural Areas have been designated within BMSP, nine state natural areas are within the SWS and 141 are within the WCR.

Wisconsin Land Legacy Places

The Wisconsin Land Legacy Report_ (WDNR, 2006) identified Wisconsin's most important conservation and recreation needs for a 50-year period. The report identified eight places in the Southwest Savanna and 39 places in the Western Coulees and Ridges as Land Legacy Places – those places that merit conservation action based upon a combination of ecological significance and recreational potential. A rank of five indicates outstanding recreation or conservation potential while a rank of one represents limited recreation potential or good to average ecological qualities. With a rating of four for conservation significance and five for recreational significance, Blue Mound State Park plays a valuable role in the region in both resource conservation and recreation.

IMPORTANT WATER RESOURCES

The headwaters of Ryan Creek are within BMSP. The creek is a designated Exceptional Resource Water and Class II trout stream.

LAND USE, SOCIOECONOMIC AND CULTURAL CHARACTERISTICS OF THE BMSP REGION

Underlying socioeconomic and cultural contexts are important in understanding the needs of the public when planning natural resources and recreational management for a property. This type of information is more readily available at the county level and thus, this section gives an overview of socioeconomic and cultural characteristics of Dane and Iowa counties, the two counties BMSP intersects. The information given here is largely derived from the United States Census Bureau and *The Ecological Landscapes of Wisconsin*, chapters 20 and 22.

LAND USE AND OWNERSHIP

Land Use

Agriculture is the largest single land use in Dane and Iowa counties, composing 39% of the total land cover. Forest and grassland combined account for an additional 44% of land cover. The landscape immediately surrounding BMSP is dominated by agriculture, especially in the SWS areas (WDNR, 2015b). There is a more even mixture of agriculture and forested lands in the WCR. Homes and farmsteads are scattered throughout the landscape. Some exurban development is present in the area, and may be increasing as lands surrounding the park, especially in Dane County, are subdivided and sold for residential use. The communities of Mount Horeb, Blue Mounds, and Barneveld are within six miles of the park. Blue Mound State Park abuts the Military Ridge State Trail on the south, and there are other DNR lands, including fishery areas, within six miles of the property. Dane County parkland borders Blue Mound State Park on a stretch of the east side, and there are private lands with conservation easements to the northeast of the park.

Land Ownership

Land ownership in Dane and Iowa counties is largely private, though state, local and municipal governments have prominent land holdings. Table 3.3 shows a sample of lands open for outdoor recreation in the two counties. In addition to those lands in Table 3.3, over 8,000 additional acres are owned by Dane County and other local municipalities. A variety of non-government organization (NGO) easements also conserve lands in the BMSP area.

Table 3.3. Acres of lands open to the public for outdoor recreation within Dane and Iowa counties

			Dane Acres	Iowa Acres	Total Acres
FEDERAL	National Park Service		295	0	295
	Fish & Wildlife Service		0	1,812	1,812
STATE	Department of Natural Resources	Fee Ownership	22,593	21,605	44,198
		Open Easements on Private Land*	519	0	519
FOREST TAX LAW PROGRAMS	Open Managed Forest Law**		125	347	472
TOTAL			33,540	24,878	49,799

*Denotes only those DNR easements open to public access. DNR holds an additional 2,504 acres in easements closed to public recreation.

** Lands enrolled under [Managed Forest Law](#) as "open" to public access allow for hunting, fishing, hiking, sight-seeing and cross-country skiing.

SOCIOECONOMIC CHARACTERISTICS

Population

Dane County, which contains the state capital of Madison and the surrounding metro area, has an estimated population of 537,328 making it the second-largest county population in Wisconsin. Iowa County has an estimated population of 23,896, making it the 49th largest county population in the state. Both counties are anticipated to experience growth in the coming decades. By 2040, Dane County is expected to grow by 14% and Iowa County by 8%. Dane County's median age is 34.4 years old compared to 41.1 in Iowa County (Egan-Robertson, 2013).

BMSP's location near USH 151 makes it readily accessible to the Madison metro-area population and beyond. Figure 3.3 shows drive-times to BMSP. According to 2017 American Community Survey estimates, over 3.7 million people live within two hours of BMSP and over 18 million are within a four-hour drive.



Figure 3.3. Areas within a two-hour (orange) and four-hour (green) drive of BMSP.

Economy

Education, healthcare and social services are Dane and Iowa counties' largest employment industries. In Iowa County, agriculture, forestry, fishing and hunting, and mining employ 6.7% of the working population, compared to 1.2% in Dane. Tourism plays a role in the employment of both counties, with 9%

of the working population in Dane County and 5% in Iowa County employed in tourism related industries¹ (American Community Survey , 2017). Retail trade is the industry that generates the highest sales and use tax in both counties (Wisconsin Department of Revenue, 2020).

CULTURAL CHARACTERISTICS AND RESOURCES

A wide variety of tribes inhabited this region, including the Ho Chunk, Potawatomi, Kickapoo, Illini (Illinois), and Miami. Archaeological and historic sites are present in Dane and Iowa counties, including one former and one present historic site within BMSP. One known archaeological site is also within BMSP. The southwest area of the state was among the first settled by Euro-Americans. Early Euro-American industry included agriculture and mining.

Published in 2013, the book *Views of the Ridge* (Gilchrist, 2013) offers a more recent oral history perspective of the region's cultural characteristics.

RECREATIONAL RESOURCES AND OPPORTUNITIES OF THE BMSP REGION

The outdoor recreational opportunities at BMSP, described in Chapter 2, are complemented by recreational offerings on other federal, state, local government and private lands in the BMSP region. This section gives an overview of regional outdoor recreation and provides context for the BMSP recreation management proposed in Chapter 2.

REGIONAL RECREATION: SOUTHERN GATEWAYS REGION

As part of efforts to better understand recreational needs and opportunities throughout the state, DNR has conducted two major assessment efforts in recent years: the **Statewide Comprehensive Outdoor Recreation Plan (SCORP)** (WDNR, 2018a) and the **Recreation Opportunities Analysis (ROA)** (WDNR, 2018b). The SCORP is completed every five years and

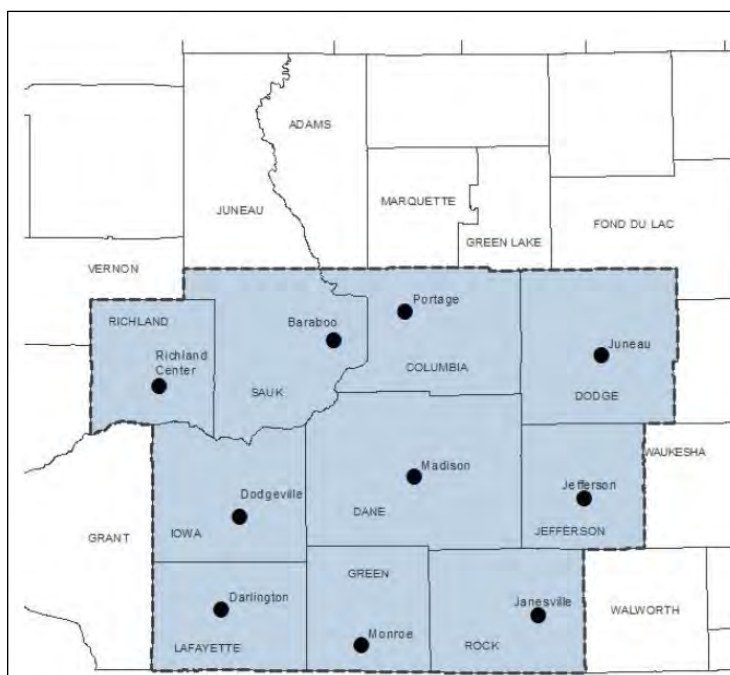


Figure 3.4. The Southern Gateways region utilized to examine recreational resources and opportunities in the BMSP region. Counties included in the Southern Gateways are shaded.

¹ According to American Community Survey 2013-2017 5-year estimates of employment in arts, entertainment, recreation, accommodation, and food services.

makes assessments for the entire state. In 2017 – 2018 DNR completed the ROA which took a more localized approach and assessed recreational opportunity in eight county-based regions. Blue Mound State Park falls within the Southern Gateways region.

The Southern Gateways region encompasses Columbia, Dane, Dodge, Green, Iowa, Jefferson, Lafayette, Richland, Rock and Sauk counties. The region encompasses a more geologically and topographically diverse area than the SWS and WCR as portions of five ecological landscapes are within the Southern Gateways.

Recreational Activities

Recreational activity participation rates and preferences for the Southern Gateways region were collected during both SCORP and ROA processes. During the SCORP process a survey of recreational participation was sent throughout Wisconsin. The results of this statistically valid survey were presented in Outdoor in Wisconsin: Results of the Statewide Comprehensive Outdoor Recreation Plan (Robert H. Holsman, 2017). The ROA utilized an online public input form and hard copy input forms were available at public meetings held during the process. The ROA public input results are not considered a statistically valid sample of each region's residents. Rather, the results represent the opinions of those interested in giving their input during the ROA process.

Based on ROA input form response, the following recreation activities are the most popular within the Southern Gateways region:

- | | |
|---|-----------------------------------|
| • ATV/UTV riding | • Single track mountain biking |
| • Big game hunting | • Snowmobiling |
| • Canoeing/Kayaking | • Surfaced trail bicycling |
| • Cross-country skiing/snowshoeing | • Swimming |
| • Fishing from a boat or from shore | • Tent camping |
| • Hiking, walking or running on trails | |

Popular ROA activities that are bolded were also indicated as popular activities in the randomized survey of Southern Gateways residents from the SCORP process. Other popular nature-based activities based on the SCORP survey include:

- Picnicking/tailgating/cookouts
- Bird/wildlife watching at or away from home
- Motor boating
- Visiting a nature center

OTHER LANDS OPEN TO OUTDOOR RECREATION

A variety of public and private lands are available for public outdoor recreation in the region. Of the eight regions utilized by the SCORP and ROA, the Southern Gateways region has the highest occurrence of Wisconsin State Park System properties (Figure 3.5). As noted in Table 3.3, nearly 50,000 acres of public and private lands are open for outdoor recreation in Dane and Iowa counties. Yet, compared to the other

regions, the Southern Gateways has relatively little public land. The public properties that are present tend to receive heavy use.

Notable public lands sharing the ten-county Southern Gateways region with BMSP and offering outdoor recreational opportunities include:

Governor Dodge State Park

Extensive recreation opportunities are available including hiking, bicycling, snowshoeing and cross-country skiing, wildlife observation, nature photography, horseback riding, boating and paddle sports, fishing, hunting and camping.

Ice Age National Scenic Trail

Hiking, backpacking, wildlife viewing and bird watching opportunities are present along this meandering national scenic trail that runs over 1,000 miles across Wisconsin.

Devil's Lake State Park

Wisconsin's most popular park, Devil's Lake State Park's recreational offerings include swimming and beach access, hiking, off-road bicycling, rock climbing, camping, playground and picnic areas, hunting, fishing, boating, snowmobiling, snowshoeing and cross-country skiing.

Yellowstone Lake State Park and Yellowstone Wildlife Area

The park is adjacent to a large wildlife area. Together, they offer hiking, equestrian, off-road bicycling, snowmobile and cross-country ski trails, along with wildlife viewing, photography, hunting, fishing, and boating opportunities.

Some private lands in the region, such as those enrolled in managed forest law or forest crop law programs, owned by land trusts, or part of the voluntary public access program are also open to outdoor recreation (see Table 3.3). Opportunities on these lands vary, and are generally limited to hiking, hunting, fishing or trapping.



Image 3.2. Mountain bike trailhead. Photo by Kevin Swenson, DNR.

FUTURE RECREATION NEEDS

The recreation needs of the Southern Gateways region are shown in Table 3.4. These needs are categorized as high, medium or low and are based on public input provided during both the SCORP and the ROA processes, assessments of existing recreational opportunities, and department staff expertise.

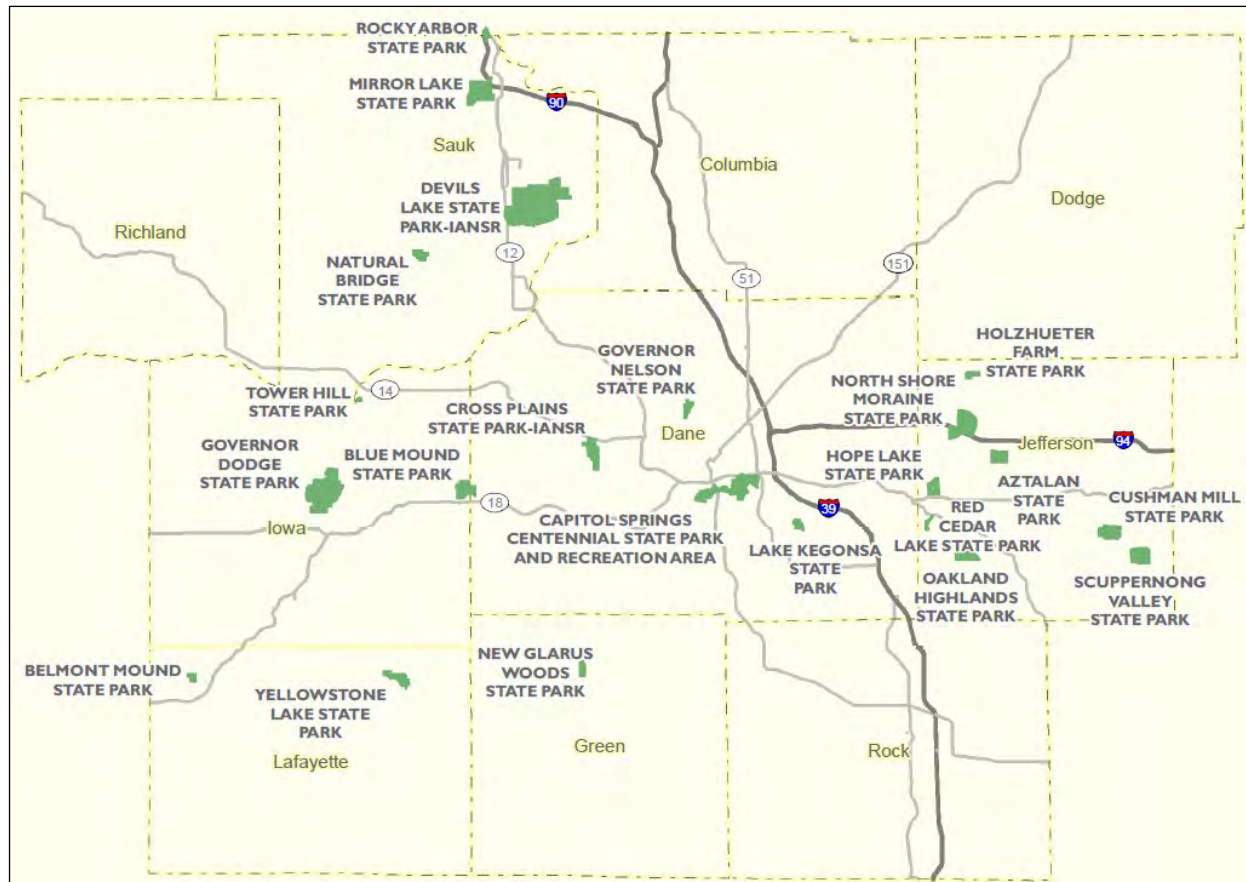


Figure 3.5. Other DNR-managed recreation properties in the Southern Gateways Region

Table 3.4. Future Outdoor Recreation Needs in the Southern Gateways SCORP Region

Recreation Need Level		
High	Medium	Low
ATV/UTV riding	Bicycling – fat tire/snow biking	Dog sledding/skijoring
Bicycling – bicycle touring/road riding	Cross country skiing	Dog training
Bicycling – mountain biking/off-road biking	Dog walking	Dog trialing
Bird or wildlife watching	Fishing – ice fishing	Horse cart driving
Camping – developed	Fishing – lake fishing from a boat, canoe or kayak	Hunting – migratory birds
Camping – primitive	Fishing – river fishing from a boat, canoe or kayak	Hunting – small game
Canoeing or kayaking	Fishing – stream/river fishing from shore or wading	Sailing, windsurfing, rowing, stand-up paddling
Fishing – lake fishing from shore or a pier	Four-wheel vehicle driving	Scuba diving/snorkeling
Gather mushrooms, berries, etc.	Geocaching	Trapping
Hiking, walking, trail running, backpacking	Horseback riding	Whitewater rafting
Motorboating (waterski/tubing, personal watercraft)	Hunting – big game	
Picnicking	Hunting – turkey	
Snowshoeing	Nature photography	
Swimming in lakes and rivers	Off-highway motorcycle riding	
	Participating in nature-based education programs	
	Rock climbing	
	Snowmobiling	
	Target shooting – archery	
	Target shooting – firearms	
	Visiting a beach, beach walking	

CONSIDERATIONS FOR PLANNING AND MANAGEMENT

The information included and referenced in this chapter helped inform many of the management decisions made in this plan. This section discusses considerations made from that information and how these considerations were addressed in the plan.

1. Blue Mound State Park has the appropriate size, environmental conditions, landscape connections, settings and features to play a role in meeting some of the ecological and habitat management priorities of the region. As compatible with other objectives, the park should be managed to meet these priorities and provide habitat for regionally important species that occur in or around the park.

Blue Mound State Park is a contributor to the ecological significance of the region. As noted in Table 3.1, six natural communities for which the SWS or WCR has major management opportunities are present in BMSP. Additionally, six of the eleven top wildlife management habitat priorities for southern Wisconsin are present in BMSP, though several are degraded or limited.

The management proposed in Chapter 2 of this plan is expected to maintain and enhance BMSP's role in meeting the ecological and habitat management priorities in the region. Management prescribed for the Oak Woodland and Prairie Management Area is expected to enhance the currently degraded oak woodland in the park. The Oak Management Area is expected to enhance regeneration and propagation of oaks within the management area. The goal of this management is to produce a long-term presence of oak forest, a wildlife management priority, which may otherwise disappear from the park in the coming years.

The surrogate grasslands, southern mesic and southern dry-mesic forest and ephemeral ponds are natural communities present in the park that are likely to be maintained through the management prescribed in Chapter 2. This will continue BMSP's role in meeting these regional priorities. From an aquatic ecological priorities' standpoint, BMSP has a limited role to play due to its topography and lack of major waterbodies or streams. Ryan Creek, a coldwater stream designated as an exceptional resource water with its headwaters in the Pleasure Valley Hardwoods Management Area, is expected to be maintained or enhanced by the management prescribed in this plan.

As noted on page 40, a number of species of greatest conservation need (SGCN) and other rare species occur in or around BMSP and an opportunity exists to manage for these species. Much of these rare species' life history needs can be met through efforts to maintain or enhance the natural communities and priority habitats of the region. For example, management in the Oak Woodland and Prairie Management Area is expected to enhance the oak woodland habitat in the park. Early blooming flowers, including those associated with oak woodland, are thought to be beneficial to the federally endangered rusty patched bumble bee. Further, the management in this plan could help sustain and enhance the summer bat habitat present in the park.

2. Primary sites warrant special consideration during the planning process.

Primary sites are ecologically important sites identified on department properties through a biotic inventory or assessment. Primary sites are delineated because they encompass: (1) the best examples of

rare and representative natural communities, (2) documented occurrences of rare species populations and/or (3) opportunities for ecological restoration or connection. These sites warrant protection and/or restoration consideration during the development of property master plans.

The BMSP REA (WDNR, 2015b) identified two primary sites within BMSP, Blue Mound Woods and Pleasure Valley Woods. The management of these sites was considered during the planning process. The management described in Chapter 2 and alternatives and effects described in Chapters 4 and 5 of this plan reflect that consideration.

3. Climate change will influence natural resources and management needs and opportunities at BMSP.

Climate change is likely to have an impact on the plants and wildlife within BMSP. Broad changes in climatic patterns will create opportunities for certain species and communities, while having negative effects on others. For example, the migration and nesting of many bird species are timed to coincide with nest site availability and optimal food for raising young. An earlier arrival of warming temperatures can result in the emergence of food sources (e.g., insect hatches, flowers, and new plant growth) earlier in the spring. For species that are dependent on day-length triggers for migration, warming climate conditions can lead to mismatches of peak food supplies and their arrival at breeding grounds. For other species, such as bird species that are year-round residents, earlier spring conditions may create opportunities to exploit additional food sources and nesting locations before increased competition arrives.

Just as certain species are likely to be impacted by climate change, so too are department management efforts. For example, prescribed burning schedules may need to be adjusted to fit into a tighter time frame between spring snow melt and earlier vegetation green-up in the spring. Projected increases in extreme events, from extreme rainfall events to droughts, may cause additional ecological disturbances that can lead to invasive species and weedy native species establishing in new areas of the park. This management plan provides the flexibility necessary to continue to manage for quality habitat and natural communities as conditions change.

4. Blue Mound State Park has the appropriate size, environmental conditions, landscape connections and settings, and features to play a role in meeting current and future recreational needs of the region.

BMSP and a variety of other public and private lands provide outdoor recreation opportunities throughout the Southern Gateways SCORP region. BMSP itself provides many of the most popular activities in the area, including seven of the 14 activities identified as high future needs in the region in the ROA.

The planned management described in Chapter 2 will continue to facilitate, and in some cases enhance, popular and high need recreational activities. The plan proposes a redesign of the mountain bike trail system, which will increase riding opportunity by increasing the number of days the trail is open and offering trails accessible to a full spectrum of skill levels. Hiking opportunities within the park will largely remain the same. However, the plan authorizes a potential connection to the Driftless Trail, which, if completed, would greatly increase hiking opportunities within the region. BMSP is not well suited to provide other high need recreational activities noted in

Table 3.4 due to space and geographical constraints.

Climate change will influence outdoor recreation at BMSP.

Climate change is also likely to impact how people recreate at BMSP and the department's management of that recreation. The changing patterns of the climate over extended periods of time may affect the type and timing of participation. If, as predicted, spring arrives earlier and autumn later, opportunities for many types of outdoor recreation activities will be extended while others may be reduced. One of the more pronounced changes that is likely to occur is reduced snow cover. Reduced snow cover is likely to impact cross-country skiing, snowshoeing, fat-tire biking and snowmobiling opportunities in the BMSP region and may lead to declines in participation rates. Similarly, increased precipitation patterns may impact trail users during the warmer months as waterlogged trails can create an unpleasant hiking experience and close mountain bike trails.

The recreation management described in this plan is well suited to address climate impacts. The proposed mountain bike trail system is designed to limit water management issues, a benefit given the expected increases in precipitation for the area (Wisconsin Initiative on Climate Change Impacts, 2020). The plan proposes to continue to accommodate snow-based activities while limiting long-term impacts to the park's land cover. While future impacts due to extreme weather events are not easily predictable, this plan and department policies provide the flexibility to adjust recreational facilities in response to climate driven issues, such as repeated trail washouts. Additionally, this plan provides a mechanism to accommodate new nonmotorized recreational opportunities that arise in response to changing conditions, as fat-tire biking has in recent years.

Evaluate adjusting acquisition boundaries and acquisition authorities.

A DNR project boundary is a preferred area established by the Wisconsin Natural Resources Board (NRB) where DNR may acquire land from willing sellers for a project. The master planning process is an opportunity to review the current project boundary for BMSP and identify any changes needed based on changes to the landscape and resource and recreation needs. The project boundary differs from the park boundary. Lands within the park boundary are currently owned by DNR and managed as part of Blue Mound State Park. Areas outside the park boundary but within the project boundary are not DNR owned or managed. DNR may explore the option to purchase these lands in fee title or through easements from willing sellers only.

This plan proposes expanding the BMSP Project Boundary by 1,175 acres as shown on Map G. DNR determined that areas within the project boundary expansion, if acquired from willing sellers, would further opportunities for outdoor recreation and natural resources management. DNR also determined that 75 acres that are currently within the project boundary should be removed. Much of this area is already developed and has low potential to contribute to recreation and natural resources management goals. Portions of the expansion area have the dramatic topography typical of the current BMSP area and would likely be popular for off-road or mountain bike trails and hiking. Areas to the west and northwest of the current BMSP project boundary may provide valuable access to the park's north slope for forest

management activities. Establishing access through areas without current recreational facilities would limit disruption to the park's current recreation facilities.



Image 3.3. East observation tower. Photo by Katie Godding, DNR.

CHAPTER 4 : ENVIRONMENTAL ANALYSIS

INTRODUCTION

This chapter describes the department's analysis of the anticipated environmental and socioeconomic effects of the proposed management and public use of Blue Mound State Park. The purpose of this analysis is to inform the public and decision-makers of the anticipated effects of the management proposed in this plan document. The information provided here does not compel a particular decision by the department or the Wisconsin Natural Resources Board. It does not prevent DNR or the NRB from concluding that other values outweigh the effects of the proposed management in this plan.

General environmental impacts associated with recreation and natural resources management are described in two Common Elements documents:

- [Impacts of Habitat Management Practices](#)
- [Impacts Associated with Outdoor Recreation](#)

The Common Element documents describe impacts of a variety of common department management actions, some of which are anticipated to occur in BMSP, some are not. It is understood that the impacts described in the common element documents are likely to apply when associated with management activities proposed in this draft plan. Thus, the common element document, and the impacts it describes, are included in this chapter via reference and should be read to gain a full understanding of potential impacts.

The environmental analysis was conducted in compliance with the Wisconsin Environmental Policy Act (WEPA) following the procedures established under Chapter NR 150 of the Wisconsin Administrative Code. Section NR 150.20(2)(a) lists property planning as an integrated analysis action. As defined in section NR 150.03(12m), an integrated analysis action is "a department action for which department programmatic procedures provide for public disclosure and include an environmental analysis that provides sufficient information to establish that an environmental impact statement is not required."

OVERVIEW OF PLANNED CHANGES TO NATURAL RESOURCES MANAGEMENT AND PUBLIC USES

The proposed management outlined in Chapter 2 of this draft plan presents a number of changes from current management.

Recreation Management

The current mix of recreational opportunities at BMSP will largely remain unchanged, but several changes to those recreational opportunities are proposed. Those changes that may have an impact on the park include:

- A redesigned mountain bike trail system created to encompass sustainable trail design standards.
- A new snowshoe and hiking trail in the Pleasure Valley Hardwoods Management Area.
- Expanded camping opportunities, including creation of a new group camp.
- A proposed snowmobile trail through the Pleasure Valley Hardwoods Management Area.

A Note on Snowmobiling Effects

Snowmobiling in BMSP has attracted a large amount of public interest relative to other topics covered in this plan. It is important to note that, relative to other activities, use of the snowmobile trail would occur during a limited timeframe. The trail would only be open to snowmobiles during periods the Dane County snowmobile trail system is open. While according to Dane County rules, snowmobile trails in Dane County may be open between December and March, the conditions must be suitable for riding before they are opened (Dane County, 2017). As winter temperatures have generally warmed in recent decades, the number of days during which conditions are suitable for trails to be open has fallen. The effects associated with snowmobile trail use described in this chapter would occur only when trails are open.

Natural Resources Management

The proposed natural resources management will be more active than the current management. Notable proposed changes in natural resources management include:

- Management for an oak woodland to prairie continuum in Management Area 2 (page 28).
- Oak retention and regeneration management in the Oak Management Area (page 34).
- Conversion of conifer plantations to different cover types in two conifer plantations and use of big tree silviculture techniques in the remaining two.

ANTICIPATED ENVIRONMENTAL EFFECTS

POTENTIAL EFFECTS ON THE PHYSICAL ENVIRONMENT

The development or construction of new department facilities (including trails) as well as natural resources management, timber management, or environmental restoration that follows protocols are minor actions that do not require analysis (s. NR 150.20(1m), Wis. Admin. Code). In developing and constructing facilities and managing natural resources, the department will follow protocols described in existing handbooks and manual codes including:

- Trail Handbook (2540.5)
- Interpretive Handbook (2550.5)
- Department Design Standards Handbook (8505.1)
- Recreation Area Operations and Maintenance Standards Handbook (2505.1)
- Sign Handbook (8672.05)
- Manual Code 4230.1 – Pesticide Use
- Manual Code 2112.3 – Recreation Trail Routing
- Silviculture Handbook (2431.5)
- Timber Sale Handbook (2461)
- Prescribed Burn Handbook (4360.5)
- Fire Management Handbook (4325.1)
- Public Forest Lands Handbook (2460.5)
- Old-growth and Old Forests Handbook (2480.5)

- Wisconsin's Forestry Best Management Practices for Water Quality Field Manual (PUB FR-093 2010)
- Wisconsin's Forestry Best Management Practices for Invasive Species Field Manual (PUB FR-444 2009)
- Wisconsin's Forestland Woody Biomass Harvesting Guidelines (PUB-FR-435-2014)
- Oak Harvesting Guidelines to Reduce the Risk of Introduction and Spread of Oak Wilt (PUB-FR-560-2020)
- Forest Roads and Wetlands guidance document (FA-20-0007)
- Manual Code 2112 - Guidelines for Defining Forest-Wildlife Habitat Management Priorities
- Manual Code 2112.1 - Forest Opening Maintenance and Construction

Regional Land Use

Land use in the Blue Mound State Park region is detailed in Chapter 3 of this plan (page 44). This plan proposes changing the BMSP project boundary to include 1,175 additional acres that may be acquired for the BMSP project from willing sellers only. The areas targeted for potential acquisition are largely forest, grassland, or agricultural. Land cover is generally expected to remain the same, though some agricultural fields may be converted to grassland or forest over time. Additionally, recreational or public access facilities may be developed in the expanded areas. Any change in land use within acquired areas is not expected to have a notable impact on regional land use.

Geological Resources

The geology of BMSP is not expected to be affected by the proposed management. The plan authorizes small changes to trail alignments as needed. This provision is expected to limit or eliminate the need to impact the chert boulders that dot the landscape. No caves are currently accessible within the park limits, but one is known to be present within the project boundary expansion area. This plan authorizes the protection of any caves acquired through land acquisitions.

Soil Resources

Construction activities related to recreational facility development will inevitably result in soil compaction and disturbance. Planned new trails (motorized and nonmotorized) will be constructed following standard department techniques. The soil effects associated with this construction are likely to be similar to construction of other trails on department properties. The proposed mountain bike trail system is expected to reduce erosion issues. Once new trails are completed, many of the more erosion-prone mountain bike trails in BMSP will be closed and rehabilitated. Overall, this may lead to lower soil displacement from mountain bike trails within the park.

This plan specifically proposes construction of one new parking lot and less than one-tenth of a mile of new, fully developed road (per NR 44.07(3)(d)). It also proposes the addition of up to 50 new auto-accessible campsites, ten new hike or bike-to campsites, and one new group camp. Table 4.1 shows the estimated acres of developed land for these facilities. Additional roads and parking areas may be constructed in new park lands acquired while this plan is in effect. Temporary roads are expected to be constructed to perform timber management activities. Construction of these facilities is expected to follow standard department protocol. New parking lot construction, construction of roads, and construction of new campground areas will have a greater effect on soils than trail construction. These activities often require extensive grading and additional substrate. Soils are also compacted. New impervious surfaces also create new runoff, which has the potential to create erosion elsewhere.



Image 4.1. Mountain bike trail rut at BMSP. Under the proposed mountain bike trail network, soil effects like this and erosion are expected to be reduced.

Table 4.1. Estimated acres of developed land from planned roads, parking lot and campsites

Facility	Size or length*	Potentially Impacted Area**
Roads	0.5 – 1 mile	3 – 6 acres
Parking Lot	10 cars	0.1 acres
Campsites	60 campsites + 1-2 group camp sites	3 acres – 4 acres

*Estimated size or length. The facilities developed may vary from these amounts based on park needs and facility siting during development.

**For roads, this assumes a 50-foot wide road, the maximum width for a fully-developed road under s. NR 44.07(3)(d), Wis. Admin. Code. The road length shown accounts for roads built for accessing new campsites in the Family Campground. For campsites, this table assumes .03 acres of developed area per campsite and that all authorized campsites are developed. This also includes one to two acres of space for Group Camp and associated facility development.

The department is subject to all stormwater control and erosion statutes and prepares erosion control plans as required (NR 216.46, Wis. Admin. Code). During construction, the department strives to minimize soils exposed to erosion and follows best management practices for doing so. In sloped or otherwise vulnerable areas, the department installs armoring measures to reduce erosion potential and limit effects to soils from construction activities. Use of new and existing roads and trails is not expected to affect soils any more than current use of similar facilities. As previously noted, the proposed mountain bike trail system redesign is expected to, when complete, reduce soil displacement that occurs due to use of the trail. The use of Class 1 e-bikes on mountain bike trails is not expected to affect the soils of mountain bike trails. However, if effects do occur on trail sections, this plan authorizes the property manager to close specific trails to e-bike use.

A portion of the former service road, which is proposed to serve as a portion of the snowmobile trail, is sloped and contains small, native material structures to direct water off the trail surface. These structures are meant to mitigate the potential for a large erosion event (washout) on this trail surface. These water directing structures may be affected by the snowmobile groomer if the groomer's blade is used on this portion of the snowmobile trail. To mitigate erosion concerns on this portion of the trail, it is expected that any snowmobile trail agreement will contain measures that ensure the structures are not damaged. Given that the snowmobile trail will be frozen when in use, few other soil effects are expected.

Soils impacts from natural resources management are expected to be similar to those of other common resource management practices.

Water Resources

Few surface water resources are present in BMSP. Of those present, the most noteworthy is likely the headwaters of Ryan Creek, a Class II trout stream in the Pleasure Valley Hardwoods Management Area. Various seeps are present throughout the park and a 1.5-acre wetland is present on the site that was formerly a pool wastewater lagoon. Few impacts are expected to these water resources. Erosion and runoff into these surface waters is expected to be minimal as the department utilizes best management practices for erosion control when constructing and maintaining facilities. The area surrounding Ryan Creek does contain recreational trails, but few impacts are expected as any new construction would implement practices to limit erosion and runoff. The proposed natural resources management in the Pleasure Valley Hardwoods Management Area is also consistent with Ryan Creek protection.

The former pool wastewater lagoon wetland may be slightly impacted by installation of a boardwalk, but long-term impacts from use are expected to be minimal. Per standard department practices, best management practices to protect springs and seeps will be implemented during management activities.

Air

From a regional perspective, air quality in Dane County is, on most days, categorized as good (Public Health Madison and Dane County, 2020). Between January 2015 and June 2020, Dane County experienced five

days with air quality notice, while Iowa County experienced none (WDNR, 2020a). The proposed management is not anticipated to affect air quality at a regional level.

During limited time periods, local air quality is likely to be affected by several management actions described in this plan. During construction or active management activities involving machinery, emissions are likely to be present. On days that prescribed burns take place, which will likely occur up to once per year and take place across one to several days per occurrence, air impacts similar to those that occur when prescribed burning takes place on other DNR properties are expected. Standard practices will be followed, which include accounting for smoke and air quality in the burn plan.

During periods that the proposed snowmobile trail is open, emissions from snowmobiles will be present near the trail. The emissions from individual snowmobiles on the proposed trail are not expected to be different than those currently emitted by snowmobiles using the connection route along Mounds Park and Ryan roads or Military Ridge State Trail. The frequency of snowmobiles in the park may increase, which would increase the overall emissions from snowmobiles. Use of the proposed snowmobile trail, and therefore emissions, are not anticipated to exceed those on the adjacent Military Ridge State Trail.

Studies of snowmobiling in other parks have shown that air pollution from over-snow vehicles, including snowmobiles, can be problematic at congested locations such as gates or other areas where running vehicles cue. These emissions decrease with distance from the area where snowmobiles operate (National Park Service, 2011). Little to no congestion of snowmobile traffic is expected within BMSP. Those visitors recreating closest to the trail are expected to encounter more emissions from the proposed snowmobile trail than those recreating a greater distance from the trail. These may include those snowshoeing near Ryan Creek when the snowmobile trail is open or fat-tire bike riders where the Overlode Mountain Bike Trail crosses the proposed snowmobile trail. Based on proximity, visitors utilizing cross-country ski trails near Military Ridge State Trail are likely to encounter more snowmobile emissions than those on the Pleasure Valley trail closest to the proposed trail.

Visual and Scenic Resources

The management proposed in this plan is expected to maintain BMSP's general aesthetic as a natural setting. Recreation management is expected to have minimal impact on visual and scenic resources within the park. Visual resources may be enhanced by tree trimming surrounding the park's two observation towers, which is authorized in this draft plan. This draft plan also authorizes management of scenic overlooks, which is likely to showcase the scenic resources associated with the park's elevation.

New facility construction is not anticipated to have a significant impact on scenic resources. The proposed new road, parking lot and group camp are proposed to be located adjacent to areas that are already heavily developed and thus will not change the overall aesthetic of the park. New mountain bike and snowshoe trails are not visually striking and generally not obviously visible to those not using the trail.



Image 4.2. Aerial photo of Pleasant Valley Conservancy. Note the transition from prairie along the southern portion of the area, to more open grown savanna, to oak forest. A similar aesthetic is expected in the Oak Woodland and Prairie Management Area.

Aesthetic impacts of the proposed snowmobile trail are expected to be minimal. A portion of the proposed snowmobile trail is on existing infrastructure, which will not change the aesthetic of the area. The portion of the snowmobile trail through grasslands is similarly anticipated to have minimal aesthetic impact as it will easily blend with the surrounding open landscape. Some brushing may be necessary, which would create an aesthetic similar to other park trails where brushing is used to maintain trails. Park users may notice signs associated with the snowmobile trail. This will be a similar aesthetic to those that mark the current snowmobile route along Mounds Park and Ryan roads. Park users may notice snowmobiles on the proposed trail when it is open. This is especially true for users of the Weeping Rock Hiking Trail and Overlode Mountain Bike Trail.

Natural resources management proposed in this plan is expected to change the aesthetics of some areas of the park. Oak management activities in the Oak Management Area (Area 5) and Oak Woodland and Prairie Management Area (Area 2) are expected to result in the most noticeable changes in aesthetics. In both, during management to create oak transition areas (oak opening habitat) or during oak regeneration practices, park visitors in the vicinity will notice extensive sight impacts associated with active management. Some, such as charred vegetation, will last days to weeks. Others, such as clearings in vegetation and signs of regenerating vegetation may last for several months to years. Long-term, the aesthetic of the oak forest in Area 2 is generally expected to change to be more open, especially in areas of transition from oak forest to prairie. In Area 5, the long-term aesthetic will be similar to the current, with oaks retained as part of the forest mix. This plan proposes converting several stands (aspen, conifer

plantations, upland brush areas) to other cover types, consistent with their surroundings. Long-term, the aesthetic of these stands will change to match their surroundings.

Active vegetation management that occurs outside of Areas 2 and 5 is expected to be less extensive. When management occurs, the public may encounter the sights and sounds associated with active management. These will be temporary, lasting between hours to a few weeks. Long-term, few aesthetic impacts are expected.

Sound Impacts

While sound impacts at BMSP are expected as a result of the management described in this plan, most of these impacts will be similar to those visitors to the park currently encounter. Common background sounds, such as those from traffic on the nearby USH 151 corridor, airplanes passing overhead, and vehicles in the park will continue to play a role in the BMSP soundscape. Other sounds, such as those from maintenance, trail grooming and other park operations activities will also continue under the proposed plan.

Sounds associated with natural resources management occur in the park currently. Under the management described in this plan, natural resources management activities are likely to become more frequent. When natural resources management occurs, visitors to the park are likely to encounter sounds associated with management. When sound impacts associated with natural resources management occur, they may last several hours to several weeks. Most sound impacts are associated with active work times and would not occur during night hours. Sound impacts associated with natural resources management will be shorter in duration than visual impacts.

Snowmobiling Sound Impacts

Background

Snowmobiling, and sound impacts related to snowmobiling, have received a large amount of public interest during this planning process. To gain an understanding of the nature of snowmobile sound impacts at BMSP, DNR commissioned a snowmobile sound analysis. The results of this analysis are in the draft report *Sound Level Analysis of Snowmobiles at Blue Mound State Park* (Wise, 2020) which has been published on the [BMSP Master Plan Website](#). This section references that sound analysis report.

When considering the volume of snowmobile sound, it is useful to note that in Wisconsin for every snowmobile manufactured on or after July 2, 1975, the noise level standard for exhaust and engine noise is 88 decibels as measured in accordance with the procedures established for the measurement of exhaust sound levels of stationary snowmobiles in the January 2004 Society of Automotive Engineers Standards J2567 (s. 350.095, Wis. Stats.). This decibel level is similar to that of a power tool, blender or hair dryer (USFS, 2011). It is also important to note that the impacts discussed here relate only to snowmobile trail use. The snowmobile trail in BMSP will only be open when the Dane County snowmobile trail system is also open.

The Military Ridge State Trail, which runs adjacent to the park, is a main snowmobile corridor in the BMSP region. Snowmobile riders currently ride along Mounds Park and Ryan roads through BMSP to connect to the county trail system north of the park. Map E shows the proposed snowmobile trail.

Under the proposed management, snowmobiles are unlikely to utilize the current route as it will be less desirable than the proposed route. The department will work with local partners to remove the current route from maps and encourage snowmobilers to utilize the designated trail proposed in this plan. For this reason, sound impacts associated with the current route along Mounds Park and Ryan roads are not included in this portion of the analysis. For a discussion of the proposed trail compared to other alternatives considered, see Chapter 5.

Summary of Potential Snowmobile Sound Impacts

The purpose of this section is to relate the results of the sound analysis to the proposed management at BMSP. The snowmobile alternative proposed in this plan is Alternative 2, as described in the Blue Mound State Park Master Plan Management Alternatives Document (WDNR, 2019a).

The sound analysis report establishes the following regarding snowmobile sound at BMSP:

- The study suggests the furthest extent of “possible noticeable and identifiable snowmobile noise” is approximately 3,000 feet from the trail. The report establishes this as sound that is at least 3 dBA above ambient and which has particular signature frequencies.
- The study also suggested the range of impactful snowmobile noise is up to 700 feet from the trails. The report defines impactful snowmobile noise as that which is 15 dBA above ambient.

Figure 4.1 shows the areas of the park that are within 3,000 (possibly audible) and 700 (impactful) feet of the proposed trail.

Table 4.2 summarizes the area of BMSP that falls within each of these zones.

Table 4.2. Area of BMSP Impacted by Proposed Snowmobile Trail and Military Ridge State Trail During Periods the Snowmobile Trails are in Use

Distance	Acres of BMSP expected to experience snowmobile sound at the given level*	Percentage of BMSP expected to experience snowmobile sound at the given level*
Possibly Audible (up to 3,000 feet from trail)	721	63%
Impactful (Up to 700 feet from trail)	219	19%

*Current DNR managed lands. Does not account for project boundary expansion areas

The report *Sound Level Analysis of Snowmobiles at Blue Mound State Park* (Wise, 2020) aims to address four topics:

- Type of sound

- How often new sounds might be heard (rate of occurrence)
- Additional volume of snowmobile sound above ambient
- Duration of impactful sound emitted from snowmobiles

Type of Sound

As noted in the sound analysis report, snowmobile sounds are already present in BMSP. As shown on Figure 4.1, areas of the park impacted by snowmobile sounds will change. Some areas that are currently impacted would no longer be, and others that are currently not impacted would be.

Rate of Occurrence of Snowmobile Sound

The proposed snowmobile trail is likely to be more desirable than the current route. It is reasonable to assume that a more desirable trail would draw additional users. Areas impacted by snowmobile sounds from use of the proposed trail may experience sound impacts as frequently as areas currently impacted by the Military Ridge State Trail.

Understanding the Sound Analysis and the Snowmobile Sound Impacts Section

The *Sound Level Analysis of Snowmobiles at Blue Mound State Park* report and this section use a variety of terms to describe sound levels that are useful to understand when considering potential snowmobile sound impacts at BMSP. These are shown in Table 4.3.

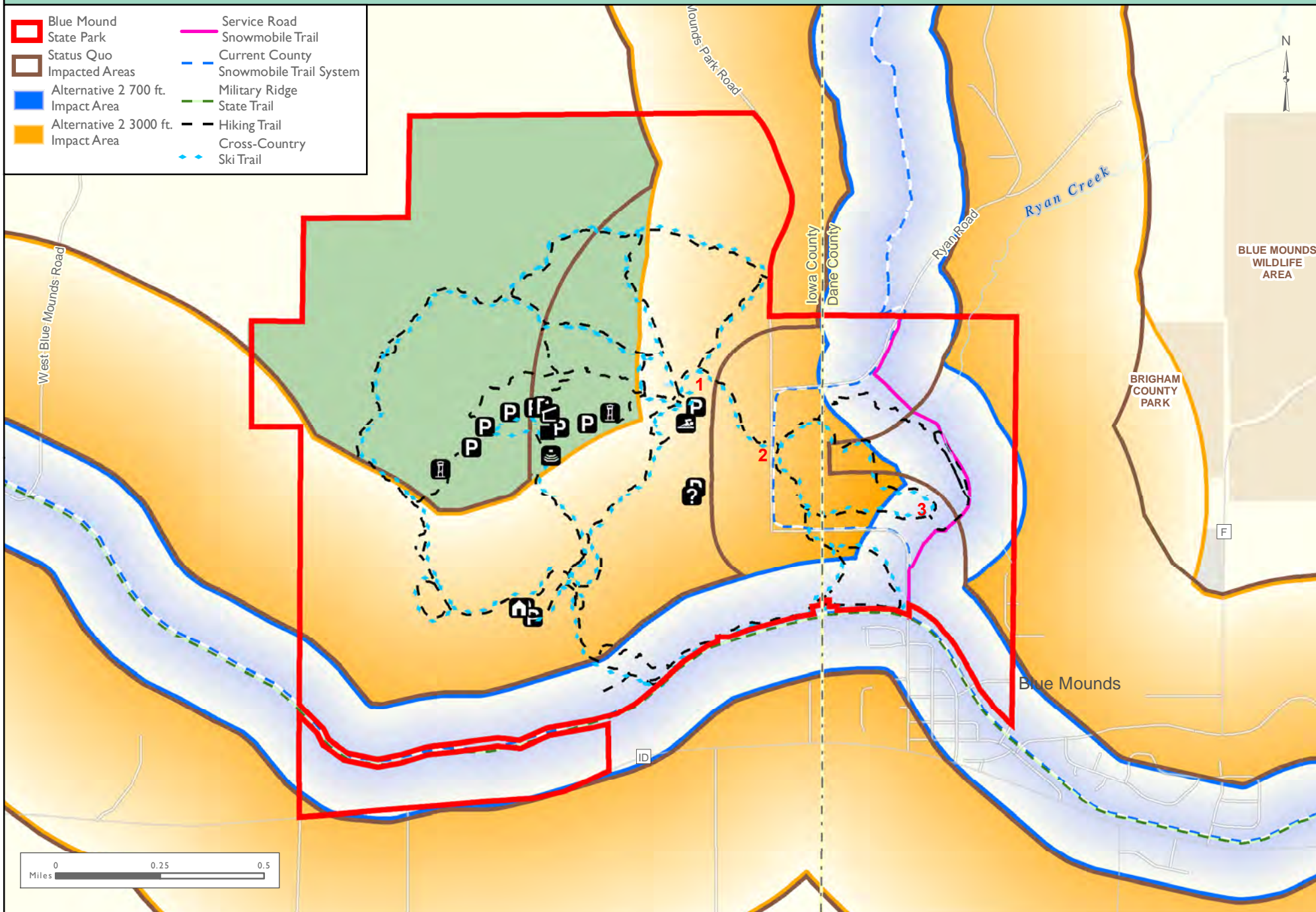
Table 4.3. Sound level terms and associated dBA levels for snowmobiles at BMSP

Sound Level	Associated dBA at BMSP	Description
Quietest Ambient	27	Represents the quietest ambient sound reading taken during the sound analysis.
L90	33	Represents the quietest 10% of ambient sound during the day. That is, the level that is exceeded 90% of the time.
L50	43	Represents ambient sound levels exceeded 50% of the day.
Impactful Level	48	Represents the sound level 15 dBA above the L90 at BMSP.

The Minnesota Pollution Control Agency's document "A Guide to Noise Control in Minnesota" (Minnesota Pollution Control Agency, 2015) provides a useful chart of comparable sounds to given dBA levels. The quietest ambient and L90 dBA levels shown in Table 4.3 are comparable to sound levels in a bedroom at night or quiet suburban nighttime. L50 is comparable to a Library or quiet urban nighttime. The impactful level is comparable to a dishwasher in the next room, or quiet urban daytime.

Approximate Sound Impact Area - Alternative 2

Figure 4.1. Possibly audible and impactful snowmobile sound ranges for the proposed trail.



The data shown on this map have been obtained from various sources, and are of varying age, reliability and resolution. This map is not intended to be used for navigation, nor is this map an authoritative source of information about legal land ownership or public access. Users of this map should confirm the ownership of land through other means in order to avoid trespassing. No warranty, expressed or implied, is made regarding accuracy, applicability for a particular use, completeness, or legality of the information depicted on this map.

Additional volume and duration of snowmobile sound

As shown on Figure 4.1, new areas of the park are likely to experience additional sound volumes from snowmobiles, while others will experience less. Those areas shown within the 700 foot “impactful” range of the proposed trail may experience sounds at least 15 dB higher than ambient. Those within the 3,000 foot “possibly audible” range of the proposed trail may experience sounds at least 3 dB higher than the ambient. Table 4.2 shows acres of the park within each of these two impact levels.

While the level of snowmobile sounds a visitor to certain areas of the park may hear is an important consideration, the duration of snowmobile sound is also important to consider for the potential visitor experience. Figure 4.1 shows three key locations in the park. Figures 4.2 – 4.4 show the duration and level of snowmobile sound a visitor may experience at these locations when a snowmobile utilizes the proposed trail.

Friends Shelter

Figure 4.2 shows potential sound levels and duration that may occur over the course of two minutes from snowmobiles passing the closest point to the BMSP Friends Shelter at 25 mph. This point on the proposed trail is approximately 2,360 feet from the Friends Shelter. The Friends Shelter is shown as Point 1 on Figure 4.1.

As shown on Figure 4.2, a figure that does not account for wind or vegetation sound attenuation, a group of three snowmobiles utilizing the proposed trail may exceed the typical L90 level of sound for over one minute, peaking at 37 dBA, which is comparable to a quiet suburban night time level of noise (Minnesota Pollution Control Agency, 2015). Sound levels for a single snowmobile would not be expected to exceed the L90 level in the scenario shown on Figure 4.2.



Image 4.3. A snowmobile sound analysis was conducted at BMSP in February 2020. Photo by Phil Rynish

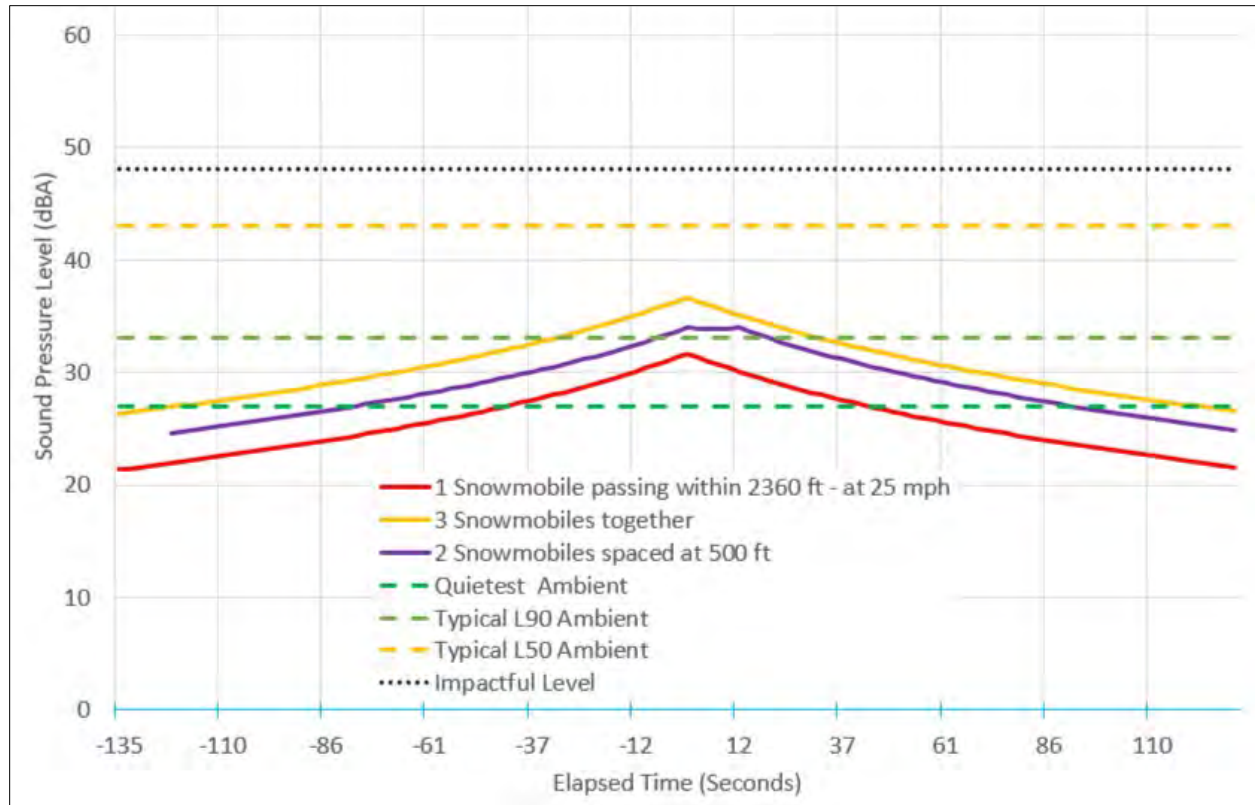


Figure 4.2. The expected snowmobile sound level and duration over a two-minute period for an observer standing near the Friends Shelter in BMSP. This plot is based on the proposed snowmobile trail's closest point to the Friend's Shelter, about 2,360 feet. This plot is based on snowmobiles traveling at 25 mph. The figure uses a sound level maximum of 78 dBA at 50 feet away with a snowmobile moving at 60 m.p.h. and is reduced by speed correction factor as well as attenuation from distance. It does not account for ground and air absorption, which may further reduce sound levels. This figure was generated by a spreadsheet (created using data from the sound analysis) provided to DNR by Wise Associates, which is available on the BMSP Master Plan website.

Prairie Overlook Bench

Figure 4.3 shows potential sound levels and duration that may occur over the course of two minutes from snowmobiles passing the closest point to the overlook bench on the Pleasure Valley ski trail at 25 mph. The closest point on the proposed trail is approximately 1,800 feet from the overlook bench. The bench is a popular location for skiers to stop and is shown as Point 2 on Figure 4.1.

As shown on Figure 4.3, a figure that does not account for wind or vegetation sound attenuation, a group of three snowmobiles utilizing the proposed trail is likely to exceed the typical L90 level of sound for over ninety seconds, with a peak of 39 dBA. Sound levels for a single snowmobile would briefly exceed the L90 level in the scenario shown on Figure 4.3. Neither the single snowmobile nor the group of three snowmobiles would be expected to exceed the L50 ambient sound level of 43 dBA.

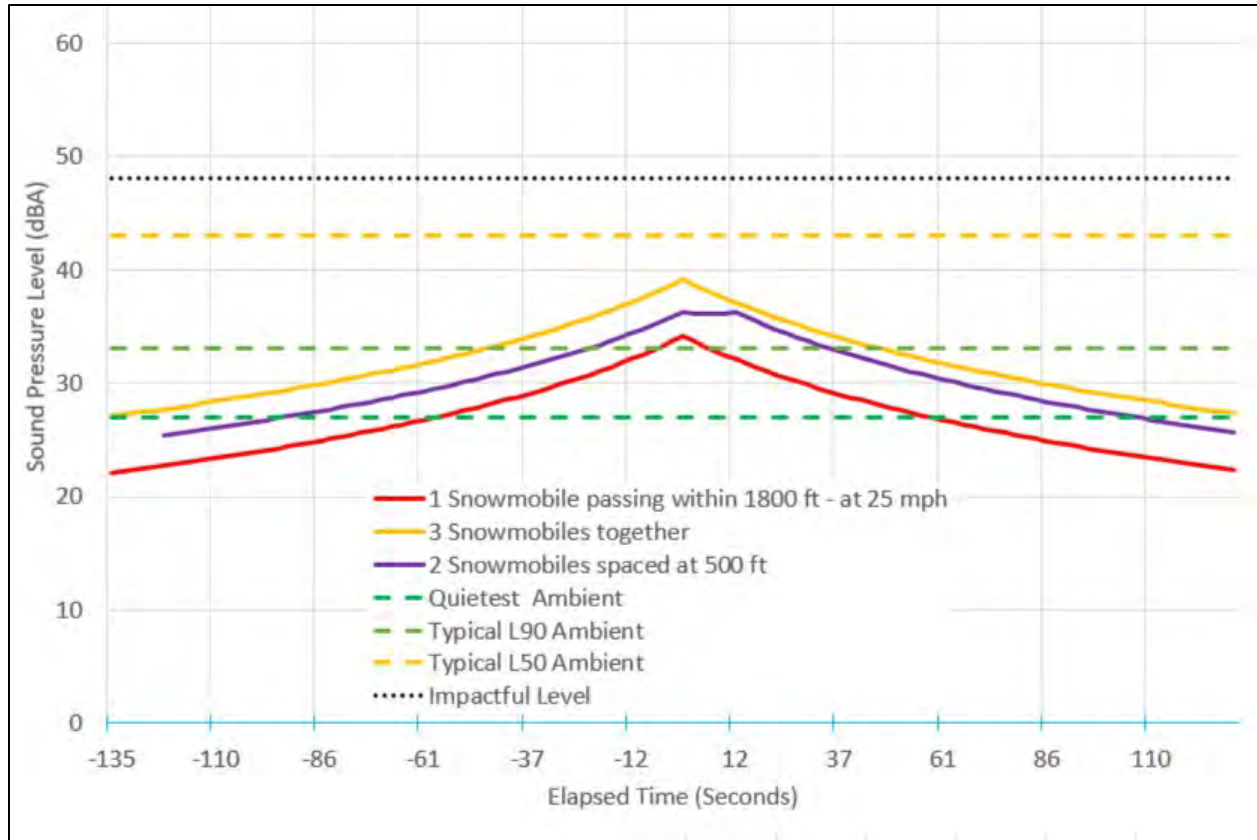


Figure 4.3. The expected snowmobile sound level and duration over a two-minute period for an observer standing near the overlook bench near the Pleasure Valley Ski Trail (Orange Loop) in BMSP. This plot is based on the proposed snowmobile trail's closest point to the bench, about 1,800 feet. This plot is based on snowmobiles traveling at 25 mph. The figure uses a sound level maximum of 78 dBA at 50 feet away with a snowmobile moving at 60 m.p.h. and is reduced by speed correction factor as well as attenuation from distance. It does not account for ground and air absorption, which may further reduce sound levels. This figure was generated by a spreadsheet (created using data from the sound analysis) provided to DNR by Wise Associates, which is available on the BMSP Master Plan website.

Closest Cross-Country Ski Trail Point to Proposed Snowmobile Trail

The closest cross-country ski trail to the proposed snowmobile trail is the Orange Loop, specifically the portion of this loop known as the Pleasure Valley Trail. At their closest, the two trails are within 215 feet of each other. This point is shown as Point 3 on Figure 4.1. As shown on Figure 4.4, a figure that does not account for wind or vegetation sound attenuation, a group of three snowmobiles is likely to exceed the impactful sound level for under 30 seconds, with a peak of 58 dBA. Sound levels for a single snowmobile may exceed the impactful level for approximately ten seconds, peaking near 54 dBA. Sound levels of 54 and 58 dBA are comparable to the sound levels of a large business office and normal speech at one meter (Minnesota Pollution Control Agency, 2015).

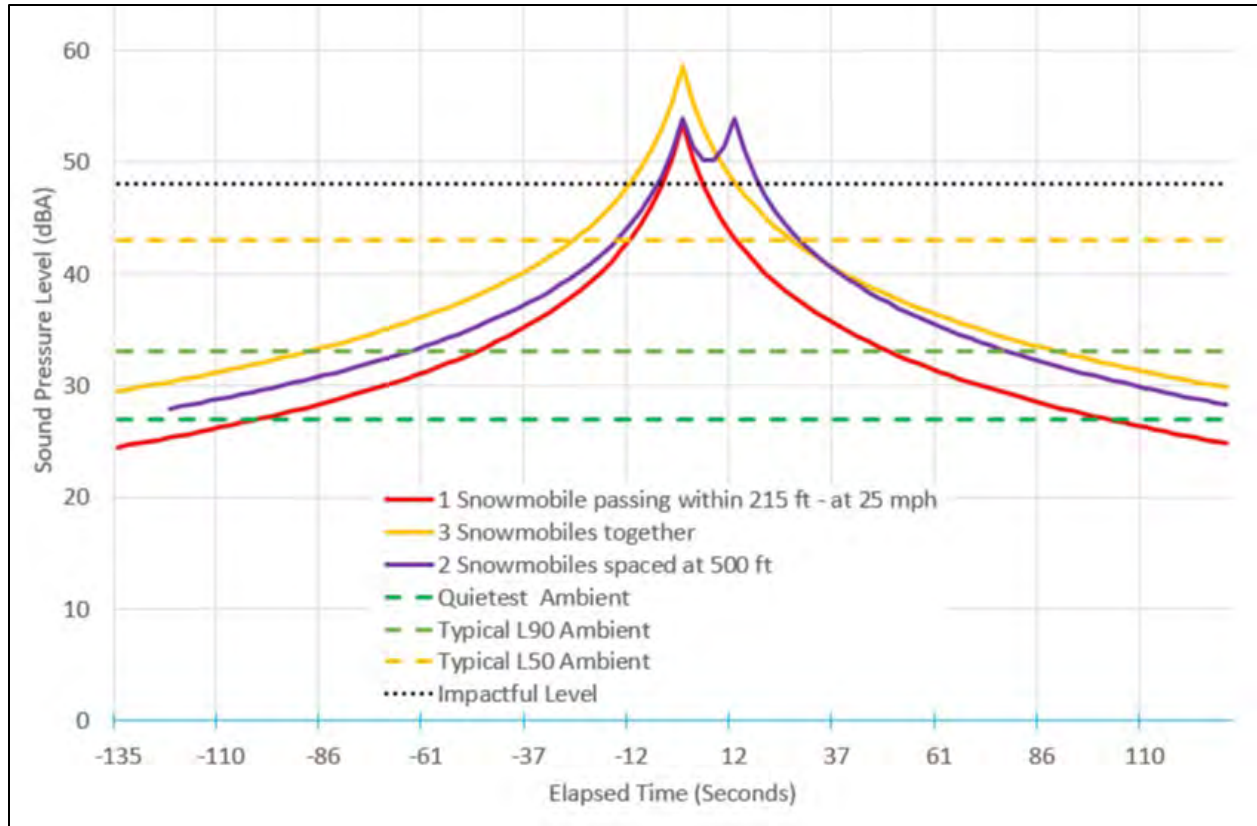


Figure 4.4. The expected snowmobile sound level and duration over a two-minute period for an observer standing on the Pleasure Valley Ski Trail at its closest point to the proposed snowmobile trail. At their closest, the two trails are approximately 215 feet apart. This plot is based on snowmobiles are traveling at 25 mph. The figure uses a sound level maximum of 78 dBA at 50 feet away with a snowmobile moving at 60 m.p.h. and is reduced by speed correction factor as well as attenuation from distance. It does not account for ground and air absorption, which may further reduce sound levels. This figure was generated by a spreadsheet (created using data from the sound analysis) provided to DNR by Wise Associates, which is available on the BMSP Master Plan website.

POTENTIAL EFFECTS ON BIOLOGICAL RESOURCES

Wildlife

Small effects on wildlife may occur as this plan is implemented. Wildlife habitat is expected to change in some areas of the park, especially in the Oak Woodland and Prairie Management Area where some areas of forest will be managed as oak woodland and savanna habitat. The habitat that this plan proposes managing for is beneficial to many of the park's common and rare species. Oak habitat types in general are beneficial to many of the park's popular and often-seen species such as white-tailed deer and wild turkey. Oak woodland and savanna are known to be important to the federally endangered rusty-patched bumble bee, and other SGCN known to occur in and around the park.

Management in this plan will maintain BMSP's status as the core of a large forested block that stretches across adjacent public and private lands. This large forested block is an unusual occurrence in the region and its maintenance through this plan is expected to have a positive effect on forest interior species. Suitable summer habitat for many of Wisconsin's bat species is present in the forested areas of BMSP. Bats are a vital part of the ecosystem and play a role in controlling many pest insect species, including agricultural pests and biting insects. Proposed management of the large forested block is expected to have effects on bat populations.

Proposed recreation uses are not expected to have a significant impact on wildlife. While the public's use of new trails, including the proposed snowmobile trail, may alter wildlife patterns, the effect is not expected to be different than from any of the other trails in the park and broader region.

Dane and Iowa counties are known to have high concentrations of deer with chronic wasting disease (CWD). In 2019, 19% of the deer tested from the four townships surrounding BMSP were positive for CWD (WDNR, 2020b). This plan proposes slightly expanding hunting opportunities in the park, which may have a small impact on the deer harvest in the area. Additionally, any areas acquired under the expanded project boundary are also expected to largely be open to hunting. Lowering deer herd numbers may help limit the spread of CWD, which may result in a long-term positive impact on the area's deer population.

Vegetation

Vegetation in certain areas of the park is expected to change as a result of management in this plan. The oak stands in the Oak Woodland and Prairie Management Area are expected to change most dramatically as they are expected to convert to oak opening and woodland. This is the expected long-term cover type. These habitats represent a transition of canopy coverage that lies between wide-open, treeless prairies and totally enclosed forest. Oak is expected to be the dominant overstory species. Oak opening is generally comprised of less than 50% canopy coverage, with characteristic open-grown tree structure. Oak woodland is generally 50-95% canopy coverage, often dominated by white oak, with a more forest-grown tree structure (taller and narrower trees), and an open understory. The herb layer within these transition areas is potentially diverse, including some members of the prairie and oak forest communities, but also featuring grasses, legumes, composites and other forbs that are best adapted to highly filtered shade conditions.

In the Oak Management Area, a long-term oak presence is expected to be maintained. Over time this will differ from other areas of the park where more passive, large tree silviculture is expected to result in a stronger maple component and few, if any, oaks. In stands where conversion is proposed, such as aspen and some conifer plantations, the vegetation will likely be similar to surrounding areas.

Recreation management will have limited impacts on vegetation. Vegetation clearing and brushing may occur during trail development. Some grassland may be cleared during snowmobile trail development. This impact is likely to be temporary as the areas will re-vegetate during summer months when the trail is not in use. Significant impacts to trees and the forest canopy are not anticipated to result from trail or

recreational facility management. Recreational trails and general use of the property may cause spread of invasive species; however, non-native invasive vegetation is expected to be reduced through the management in this plan. Facilities that mitigate the risk of invasive species, such as bike wash stations, are expected to remain in place and invasive species control efforts will continue. Areas of disturbed soil can be a gateway through which nonnative invasive species become established. New trails will be monitored to limit the risk of invasive species establishment along these corridors.

Forest and Timber Products

Blue Mound State Park has not historically been a property managed to provide forest and timber products. The long-term management goal of the park is not the production of forest products. However, some commercial timber harvest is likely to occur through carrying out habitat management objectives, especially in the Oak Management Area and Oak Woodland and Prairie Management Area.

POTENTIAL EFFECTS ON CULTURAL, HISTORICAL AND ARCHAEOLOGICAL RESOURCES

Few impacts to cultural, historical and archaeological resources are expected to result from this plan. During the design phase of recreational facilities in this plan, the DNR Archaeologist will be consulted to assess the design and siting for any potential impacts. If an archaeological resource is discovered during facility development, all appropriate actions will be taken in accordance with applicable laws and regulations. Continued protection of BMSP as a state park will have positive impacts on the known archaeological site within the property.

POTENTIAL SOCIOECONOMIC EFFECTS

ACCESS TO PUBLIC LANDS

This plan is expected to have a positive effect on public land access. The plan proposes expanding the BMSP project boundary and acquisition goal by 1,175 acres. These are lands that may be acquired by the department provided a willing seller and adequate funding are available. DNR only acquires land from willing sellers. Any park expansion would open additional lands to public access. Additional recreational and public access facilities may be constructed as part of the boundary expansion to allow for easier public access.

The BMSP project boundary would contract by 75 acres if this proposed plan is approved. This means that these areas would be removed from the BMSP project boundary and the DNR would no longer seek to acquire these lands. The proposed contraction areas have low potential for acquisition as they are developed and are not likely to contribute to the natural resource or recreation management goals of the plan.

The department continues to support the efforts of Dane County to expand public access in the BMSP area through acquisition of lands in the Brigham County Park area. Any acquisition from Dane County will aid in furthering the creation of a large block of public land in the Blue Mounds area. Large blocks of public

land are uncommon in southern Wisconsin and acquisition of additional lands by Dane County and other department partners will have a positive impact on public land access.

POTENTIAL EFFECTS ON RECREATIONAL PARTICIPATION IN THE PARK

Mountain and Fat-Tire Bicycling

The proposed plan is expected to have a positive impact on participation in recreation at BMSP. The proposed mountain bike system is expected to increase ridership at the park. The mountain bike trail system currently in place at BMSP is considered technically challenging and difficult for beginner riders. The proposed trail network represents a redesign to create a mountain bike experience for a full spectrum of skill levels, with certain trails suited for beginners and others for advanced riders. By modifying the trail system to accommodate riders of differing abilities, the mountain bike experience is anticipated to be accessible to more users. Rugged, technical trails will remain available in the proposed trail system to continue to accommodate those seeking that experience. Additionally, the design of the proposed trail system is expected to reduce the number of days the trails are closed due to water logged trails or soil displacement issues.

Snowmobiling

Potential Effects on Snowmobiling in BMSP

This plan proposes a snowmobile trail connecting the Military Ridge State Trail to the county snowmobile trail system north of the park which will change the current snowmobiling experience. Snowmobiles currently operate along Mounds Park and Ryan roads to make this connection. Public input has suggested that this current route is not a desirable experience. The proposed trail provides a riding experience away from the roadway and is likely more desirable to snowmobile riders than the current route. Thus, participation in snowmobiling within the park is likely to increase. The use of the proposed trail is expected to be less than that of the Military Ridge State Trail (MRT) adjacent to the park. This is because the MRT is an east-west corridor with access to more communities than the county trail system the proposed trail through the park would connect to. However, snowmobile use within BMSP may be up to the levels of that on the MRT.

Snowmobiles are not expected to operate outside of the designated trail while within the park boundaries. While snowmobiles may legally operate adjacent to Mounds Park and Ryan roads next to the roadway (i.e., on the road shoulders) regardless of what the department includes in its plan, this is expected to rarely occur. It is not the intent of this plan to propose a snowmobile riding loop within the park. Once the new trail is opened, the department will no longer accommodate usage along the roadway by allowing snowmobile route signs or grooming. It is anticipated that most, if not all, snowmobiles will instead choose to use the proposed trail as it will be the designated, signed route that is a more desirable riding experience.

Potential Effects on Other Recreational Activities from the Proposed Snowmobiling Trail

The proposed snowmobile trail re-introduces a motorized use to the Pleasure Valley area. This area contains the former snowmobile corridor, snowmobiles have been absent since the early 1990's. This area is used by snowshoers, winter hikers and mountain bikers. During periods when the snowmobile trail is open, these users are likely to notice the sights and sounds associated with a snowmobile trail. The magnitude of these effects are described further in the Sound Impacts (page 63) and Visual and Scenic Resources (page 61) sections of this chapter. Some park users may choose to recreate elsewhere, or alter their trail choices, during snowmobile season if they do not wish to hear or see snowmobiles.

The proposed snowmobile trail utilizes a portion of the Weeping Rock hiking and snowshoeing trail. While snowshoeing is allowed throughout the park, on and off trail, the shared trail surface between snowmobiling and nonmotorized uses is likely to lead to a decrease in hiking and snowshoeing in this area when the snowmobile trail is open. This plan proposes constructing a snowshoeing and hiking trail in the same management area to provide an option for snowshoeing and hiking the Weeping Rock Hiking Trail without using the portion of the trail shared with snowmobilers. After the completion of this trail, participation in snowshoeing is expected to occur at the current level.

As shown in Table 4.4, the proposed snowmobile trail will create four intersections of motorized and nonmotorized trails. These intersections will be signed. Notably, the proposed snowmobile trail does not intersect cross-country ski trails, which are likely the most heavily used of the winter trails at BMSP.

Table 4.4. Intersections of Nonmotorized Trails and Proposed Snowmobile Trail

Nonmotorized Trail	Winter Use	Number of intersections with Proposed Snowmobile Trail	Number of Intersections with Current Snowmobile Route
Pleasure Valley Trail	Cross-Country Skiing	0	2
Weeping Rock Hiking Trail	Hiking/Snowshoeing	2	0*
Overlode	Fat-tire biking/snowshoeing	2	1*

*Additional trail crossings with the current snowmobile trail occur if the user accesses the trail from the main trailhead in the Pool and Trailhead Day Use Area.

Other Effects on Recreation Participation

Access to recreational activities may be temporarily affected during natural resources management activities. This will be especially true during intensive management activities such as timber harvests, prescribed burns or other oak regeneration activities. Occasional trail closures lasting from several hours to several days may occur when hazardous trees are removed and invasive and other weedy species are managed. Management activities associated with oak regeneration practices may necessitate trail closures of several weeks to months depending on the location and size of the management activity. These management activities would occur infrequently.

Wildlife watching and hunting opportunities may change as many BMSP resident species are likely to be attracted to areas of regenerating vegetation following management activities. Oak stands are important food sources and habitat for wildlife. Nature education may also be enhanced as programming would be able to take advantage of the opportunity to explain management activities and the succession that follows.

POTENTIAL FISCAL IMPACTS ON LOCAL AND STATE GOVERNMENTS

This plan proposes a number of facility changes which, if developed, will carry fiscal impacts.

Trail Facilities

New trail facilities are proposed for mountain biking, hiking/snowshoeing, and snowmobiling. Potential financial costs associated with developing those facilities are described here.

Hiking and Snowshoeing Trails

This plan proposes approximately 1 mile of new hiking and snowshoeing trail. The department estimates development of a native surface trail will cost between \$15,000 and \$25,000 per mile to develop. A portion (approximately 0.25 miles or less) of the proposed hiking trail will be boardwalk, which may carry higher per mile costs. Trail maintenance is expected to cost \$250-\$500 per year after the trails are constructed.

The cost to construct the proposed connection to the Driftless Trail, if that project were to come to fruition, is not accounted for here as the length of the eventual connection is not known. While the length of that potential connection is not known, trail construction costs per mile would likely be similar to those for the mountain bike or snowshoe trails.

Mountain Bike Trails

Approximately 8.1 miles of newly constructed mountain bike trails are proposed in this plan. The department estimates development of native surface trails, like those proposed, may cost \$15,000 – \$25,000 per mile. Expected maintenance costs may add \$250-\$500 per year to the initial construction. Given that an extensive trail system currently exists, construction of new trails may be phased to allow construction of top-priority trails first, with others being constructed as fiscal resources become available. Top priority trails may be those that alleviate current trail closure issues or create experiences for differing riding experience levels.

The mountain bike trail system at BMSP is maintained by a partner group through a land use agreement with DNR. The club relies on volunteers to complete this maintenance, which may substantially lower construction and maintenance costs. Implementation of this plan is expected to result in increased mountain bike activity at the park, which may lead to positive fiscal impacts for both the park and the surrounding areas. Mountain bikers must purchase a state trails pass from the State of Wisconsin. Therefore, additional mountain bikers may create additional trail pass revenue.

Snowmobile Trail

The department estimates the snowmobile trail, which would only be used as a snowmobile trail in frozen-ground conditions, will cost approximately \$10,000 per mile to develop. New construction is expected for less than 0.5 miles of the proposed trail's length of 0.9 miles. There are several railings present along the proposed snowmobile trail that would need to be moved to accommodate the trail. Costs associated with moving these railings are expected to be low, not more than \$2,000. Snowmobile trail construction costs are generally born by local snowmobile clubs. It is expected that local snowmobile clubs would fund the construction and maintenance of the snowmobile trail.

Parking Lots and Roads

This plan proposes a new parking lot to serve users of the Bike/Hike Campground. The estimated cost of this parking lot is \$30,000. This estimate is based on a paved, ten-car parking lot. A new paved service road to access the park's maintenance shop is estimated to cost \$40,000, based on a 0.1-mile asphalt road.

The plan authorizes additional road and parking facilities for public access to areas acquired as part of the project boundary expansion. Costs for these roads are expected to be proportional to those estimated for the proposed road to the maintenance shop. Parking area costs in expanded areas may be proportional to or lower than the proposed Bike/Hike Campground parking lot depending on size and surfacing.

Campgrounds

This plan proposes two expansions to existing camping opportunities at BMSP: up to 50 additional campsites in the Family Campground and up to 10 additional campsites in the Bike/Hike Campground. Estimated costs for these expansions are shown in Table 4.5. Campsites developed in the Family Campground are anticipated to be auto accessible. These campsites are authorized to have electrical receptacles, though it is unlikely all will. The number of electrified campsites in the Family Campground will be determined during plan implementation.

Table 4.5. Potential Fiscal Impacts

Campground Sites	Cost/site
Family Campground sites with electrification	\$12,000
Family Campground sites without electrification	\$8,000
Bike/Hike Campground sites	\$2,500

Development of a group camp is also proposed in this plan. Construction of a 20-40-person group camp with a small shelter, vault toilet facility, picnic tables and fire rings is projected to cost \$100,000.

Camping at BMSP is a revenue generating activity. Initial construction costs may be offset over time by camping fees generated from use of the new facilities.

Project Boundary Expansion

The purchase of additional lands under the proposed expansion of the project boundary and acquisition authority is likely to have fiscal costs for the department. The magnitude of these costs will depend on a variety of factors including the level of acquisition that occurs and the price of land at the time of acquisition. Inclusion of lands in the project boundary does not mean the department will purchase these lands but rather that it may purchase them should a willing seller become available. Thus, while this plan proposes a net project boundary expansion of 1,100 acres, it is not known what proportion of this acreage will eventually be purchased by the department.

Fiscal Impacts on Local Governments

Few fiscal impacts to local governments are expected from the actions proposed in this plan. Project boundary expansions can, at times, lead to concerns regarding a perceived loss of tax revenue in the municipality in which the department acquires land. The department makes an annual payment in lieu of taxes (PILT) under ss. 70.113 and 70.114, Wis. Stats., to the appropriate municipality for all property it owns in fee title.

The public access and recreation management proposed in this plan may lead to an increase in visitors to the park. This increase may lead to an increase in sales tax dollars collected by local governments as a result of visitor spending.

CUMULATIVE IMPACTS, RISK AND PRECEDENT

CUMULATIVE IMPACTS

The actions proposed in this plan are anticipated to have positive long-term cumulative impacts on the natural environment and on the public's use of the property. The proposed management actions in this plan are collectively expected to provide the following benefits:

- An overall increase in recreational opportunities and a higher quality of recreational experiences for park users through expanded and improved recreational facilities.
- Expanded and improved recreational opportunities and access for persons of all physical abilities.
- Improved habitat for game and non-game species, including endangered, threatened and species of greatest conservation need.
- Long-term maintenance of important native communities with improved ecosystem management.

This plan is expected to be incorporated into the Southwest Savanna Regional Master Plan. The management described in this draft plan will aid in meeting the ecological and recreation goals and priorities of the region.

RISK AND PRECEDENT

The management proposed for BMSP poses a low risk to the human environment. No new, high risk management activities are proposed, nor are any that involve an irretrievable commitment of resources or actions that could not be reversed in the future.

The proposed trails and recreation facilities are similar in nature to other those found elsewhere in Wisconsin. The proposed land management activities would be a continuation of existing approaches to habitat management used by the department throughout southern Wisconsin.

Risks associated with prescribed burns for habitat management would be mitigated by using experienced staff to conduct the burns, by burning only under low risk conditions, by pre-establishing appropriate firebreaks, and by having fire-fighting equipment and personnel present on site during burns. By reducing fuel loads over time, periodic prescribed burns also reduce the chances of a wildfire turning into a catastrophic, uncontrolled event.

Approval of this management plan would not directly influence future decisions on other DNR property master plans. Much of the proposed management in this plan, such as providing a range of recreation experiences, managing forests, grasslands and savannas, and working with partners, are common to other department properties.

This plan or portions of it may serve as reference or guidance material to aid the preparation of master plans for similar properties elsewhere. Similarly, the process used to draft this plan may be used as an example for other similarly high-profile planning projects. This plan is expected to be incorporated into the Southwest Savanna Regional Master Plan by reference. The recreation and resource management opportunities described in this plan may influence the SWS planning team's decisions on management to best meet the region's needs.

CHAPTER 5 : EVALUATION OF ALTERNATIVES

This chapter describes the management alternatives that were considered by the planning team and the opportunities, anticipated effects, and challenges associated with each alternative. Those alternatives noted as preferred were selected and proposed in the plan. The proposed management associated with the preferred alternatives is further described in Chapters 2 – 4. The purpose of this chapter is to convey many of the considerations the planning team undertook when drafting this master plan.

RECREATION AND PUBLIC USE MANAGEMENT ALTERNATIVES

CAMPING

Alternatives Considered

Expanded Family and Bike/Hike Camping and Group Camp Addition (Preferred)

The preferred alternative proposes expanding camping opportunities at BMSP. As shown on Map E, additional camping opportunities are proposed in three areas:

- An expansion of up to 50 sites is proposed for the Family Campground.
- A new group camp area is proposed east of the current Family Campground.
- Up to ten additional sites are proposed in the Bike/Hike Campground. These sites would be similar to the current sites in the Bike/Hike Campground. The campground is proposed to remain rustic.

Status Quo (No Action)

Under the Status Quo alternative, current camping facilities would be maintained, and no additional opportunities would be added.

Additional Alternatives Considered but Dismissed

Expanded hike-to (backpack) camping opportunities

The department considered the addition of single primitive or semi-primitive campsites in secluded areas of the park, away from the Bike/Hike or Family campgrounds. This alternative was dismissed from consideration due to concerns regarding law enforcement, site maintenance and a lack of suitable sites for a primitive, secluded camping experience.

Comparison of Effects

The current camping experience at BMSP is popular. Both the Family and the Bike/Hike campgrounds are often near or at capacity during summer months. The preferred alternative would add opportunity to existing recreational experiences at BMSP and provide a new experience by adding group camping. Based on the location of the potential additional family camping loop and staff recommendations, the expanded area would likely be better suited to pull-behind campers and RVs, which can be difficult to maneuver into existing campsites. The existing Bike/Hike Campground is also popular and is expected to continue to grow in popularity. The preferred alternative allows additional sites to be developed as visitor demand increases.

BMSP cannot currently accommodate large groups (more than six people) that wish to camp together on a single site. The addition of an outdoor group camp facility would add a new camping experience to BMSP and allow the park to host these larger groups.

Selection of the no action alternative would preserve the current, demonstrably popular, experience. As the population of the region surrounding BMSP continues to grow, demand for camping experiences in the region is also likely to grow. The no action alternative would not allow BMSP to meet the larger demand and would create challenges for those who wish to camp in the region.

Potential Environmental Effects

The expansion of camping at BMSP is proposed to occur in areas that have been previously developed or near these areas. New facilities are anticipated to draw more users which can have negative environmental effects. The nature of the effects would be similar to those that currently occur at the park but may be greater in magnitude due to additional visitors.

The no action alternative would have few environmental effects beyond those currently experienced due to campground use.

Fiscal Impacts

The expanded camping alternative may have positive fiscal impacts as it expands a fee-generating recreational opportunity and may increase economic benefits to the local community by bringing additional visitors to the area. The upfront cost of constructing additional camping facilities may require implementing this alternative in phases. This allows the department to match the number of campsites constructed with the cost that might realistically be recouped through user fees.

The no-action alternative would have little financial impact, positive or negative. The current campgrounds would continue to be maintained and serve the same number of visitors.

Issues of Public Interest

While much of the public input supported expanded camping opportunities, concerns regarding overcrowding, loss of seclusion and a potential increase in RV campers were expressed. Support for more remote camping opportunities was also expressed.

CROSS COUNTRY SKIING

Alternatives Considered

Status Quo (No Action, Preferred)

The current trail system as shown on Maps D and E is proposed to be continued.

Controlled Mounds Park Road Crossing

The department examined the alternative of adjusting cross-country ski trails to consolidate the two current Mounds Park Road trail crossings to one at a controlled intersection. Figure 5.1 shows trail configuration under this alternative, as well as a new trail that would be constructed utilizing a former powerline corridor to reach the Park Entrance Road. All Mounds Park Road crossings would occur at an intersection as a crosswalk. A small bridge and boardwalk facilities would be constructed as necessary to

facilitate crossing of wet areas. The department would likely request the Mounds Park Road and Park Entrance Road intersection become an all-way stop. Under this scenario, all traffic would be required to stop and allow pedestrian trail users to cross the roads consistent with state laws.

Comparison of Effects

The current cross-country ski trail system is very popular with park users. Both alternatives would maintain the majority of the ski trail system as is and both would allow BMSP to maintain its niche as a location that is primarily set-up for classical cross-country skiing. By moving the Mounds Park Road trail crossings to one single point, under the alternative trail alignment, all trail users would cross at a point where traffic is required to stop. The current trail crossings were evaluated by DNR engineering staff and no safety concerns for either crossing were identified.

Potential Environmental Effects

Environmental effects resulting from either alternative would be minimal

as each largely maintains the current ski trail network. The Controlled Mounds Park Road Crossing alternative would result in minor impacts to vegetation to create the trail to the controlled Mounds Park Road crossing. Most of the impact would be to brush that has grown into the former powerline corridor. Additional vegetation loss, including of several trees, may occur on the north-south stretch of trail to the corner of Mounds Park Road. The trail would be in, or near, previously disturbed areas. Maintenance of both trails is likely to result in minor vegetation impacts.

Potential Socioeconomic Effects

Socioeconomic effects are similarly expected to be minor. The Mounds Park Road Crossing would likely require a small bridge capable of handling pedestrian traffic and boardwalk facilities. These facilities would create additional construction and maintenance costs. The status quo will have few socioeconomic effects. The current trails are well-established and are likely to only require ongoing maintenance.

Effects on User Experiences

Overall, the user experience would be minimally affected through either alternative. The Controlled Mounds Park Road crossing would change the users' approach from the cross-country ski trailhead in the

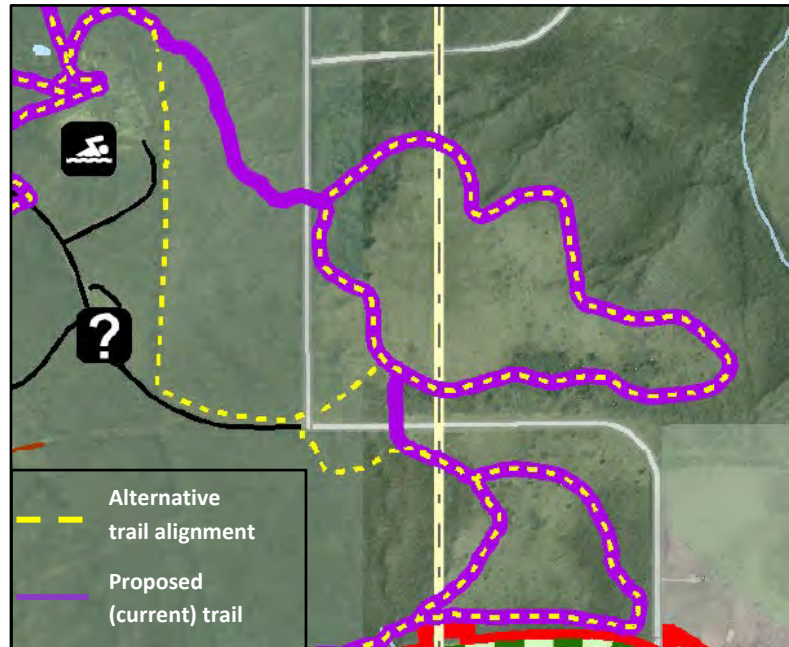


Figure 5.1. Cross-country ski trail crossing alignments for each alternative. The department has proposed the current trail crossings be maintained; no change in Mounds Park Road crossings is proposed for cross-country skiing.

Pool-Trailhead Day Use Area to Mounds Park Road. This change would be slight, but would introduce a straighter trail, which some may find less appealing.

Public Input

Comments received throughout the planning process largely supported the current trail system and the classical cross-country skiing niche it occupies within the region. Input gathered during the project's initial public involvement phase indicated trail and motorized use crossings were a concern to some commenters. These comments were one of the impetuses for the formation of the controlled Mounds Park Road Crossing alternative, which was presented as a management alternative for public review.

Comments on the two cross-country ski alternatives were mixed in terms of support for the two alternatives. Several stakeholder and partner groups submitted comments in favor of the status quo.

MOUNTAIN BIKING

Alternatives Considered

Trail Network Redesign (Preferred)

Under this preferred alternative, the mountain bike trail system would be adjusted as shown in Map D (existing) and Map E (proposed). The trail system shown on Map E is a conceptual design of the trails; it will likely vary slightly due to on-the-ground conditions and to ensure sensitive resources are protected.

Status Quo (No Action)

The no action alternative would maintain the current mountain biking trail system, without change, as shown on Map D. Under this alternative, additional trails and trail modifications would not be authorized.

Alternatives Considered but Dismissed

Additional Mountain Bike Trails near Pokerville Trail

Initial design consideration for the Trail Network Redesign Alternative included additional trails, especially in the southeast corner of the park, near the Pokerville Mountain Bike Trail and near the Basalt and Pepper Mountain Bike Trail. These trails were modified to reduce trail densities, resource impacts and potential conflict with other recreational uses.

Comparison of Effects

The current trail system, especially the advanced skill level it requires, is popular with many mountain bikers. These riders appreciate the technical nature of the trail and are drawn to BMSP for the challenging trails. The Status Quo Alternative would preserve all trails currently at the park and maintain this popular trail system.

The Trail Network Redesign is expected to offer a trail system that offers riding opportunities to beginner, intermediate and advanced riders. Additionally, the Trail Network Redesign offers a more sustainable trail system that is expected to require less work to maintain by adopting modern trail designs which limit soil movement. This is expected to allow the trails to reopen more quickly after the spring melt and precipitation events. The trail network redesign expands the current trail system by 1.5 miles.

Potential Environmental Effects

Effects associated with the proposed Trail Network Redesign alternative are discussed in detail in Chapter 4. Under the proposed trail system redesign, mountain bike trail miles would be added, requiring construction in new areas of the park. Trail density would increase in some areas and decrease in others. Those stretches of mountain bike trail that are part of the current trail system, but not included in the network redesign on will be closed and rehabilitated.

The current trail system is well established, and no new trail construction is expected under the status quo. The status quo would neither raise nor lower the overall trail density in any area of the park. Soil displacement and water retention issues that currently occur on the trail system now would likely continue or worsen. This may result in a negative impact on trail usership and an increase in environmental effects associated with degraded trails. Additionally, under the status quo, trails that are determined to be unsustainable due to maintenance issues may be closed.

Potential Socioeconomic Effects

The proposed trail network has upfront costs associated with trail construction, but these may be recouped through trail pass purchases and lower maintenance costs. Social and economic effects of the status quo would likely be minimal as it would continue the current state. Trail pass sales related to BMSP would likely remain at current levels. Over time, this alternative may have negative fiscal impacts as the current trail system is technically advanced and may have trouble drawing new volunteers to maintain the trails. This would lead to additional maintenance costs. Additionally, the current trail system frequently suffers soil displacement issues, which require fiscal resources to repair.

Effects on User Experience

The current trail system at BMSP is considered technically challenging and difficult for beginner riders. Under the status quo, this trail experience would continue. The trail network redesign would create a mountain bike experience for a full spectrum of skill levels, with certain trails suited for beginners and others for advanced riders. Additionally, the redesigned trail system is expected to decrease the number of days the trails are closed due to soil displacement or wet trail conditions.

Public Input

Comments received throughout the planning process discussed the challenge of frequent trail closures. The proposed redesigned trail system shown on Map E largely reflects the trail system redesign submitted by the partner organizations that maintain the current mountain bike trail system. The department has also received a limited number of comments suggesting the trail system should remain rugged and technically challenging.

SNOWMOBILING

Snowmobiles currently utilize the unpaved areas along Mounds Park and Ryan roads as a connection between Military Ridge State Trail and the county trail system north of the park.

The current snowmobile route along the roads has terrain obstacles and, at times, limited clear space. Public comments have indicated this route presents an unpleasant riding experience. The snowmobile alternatives developed by the planning team considered:

- Maintaining a safe connection, outside of the right of way ditches, from Military Ridge State Trail to the existing county system trails north of the park.
- Ensuring that any snowmobile connection opportunities minimize disruption to other activities.
- Minimizing snowmobile and nonmotorized use trail crossings.

Alternatives Considered

This section describes the alternatives that were considered by the planning team. The snowmobile alternative numbers (i.e. Alternative 1) used in the BMSP Management Alternatives Document remain in this document given the level of public interest surrounding these alternatives.

Alternative 1: Mounds Park – Ryan Road Connector Trail

A 1.4-mile snowmobile trail paralleling the current Mounds Park Road to Ryan Road corridor would be constructed under Alternative 1. The trail would be a two-way trail and would generally be at least 40 feet from the paved road to comply with s. 350.02(2)(b)4.a., Wis. Stats. Under this alternative, the trail may be constructed within 40 feet of the paved roadway if sufficient vegetation is present to serve as a headlamp barrier and the topography is suitable. The trail would be 12-feet wide.

Selection of the Mounds Park – Ryan Road Connector Trail would either require selection of the Controlled Mounds Park Road Cross-Country Skiing Alternative (page 80) or slight adjustments to the alignment of existing recreational opportunities, including the Pleasure Valley ski trail crossing of Mounds Park Road. These changes would likely be necessary to enhance the safety of all park users while minimizing impacts on existing recreational opportunities.

Alternative 2: Service Road Trail (Preferred Alternative)

Alternative 2 is the proposed alternative. As shown on Map E, a snowmobile trail is proposed to connect the Military Ridge Trail to the club trails north of the park primarily utilizing a former service road through the valley in the eastern portion of the park, commonly known as Pleasure Valley. Portions of the trail connecting the Military Ridge Trail to the existing service road will be constructed. The service road portion of the trail is likely to need minimal improvement to sustain a snowmobile trail. This trail would follow a path similar to the former snowmobile trail that is believed to have operated until the early 1990's.

Alternative 3: West and North Slope Trail

Alternative 3 represents a new, conceptual snowmobile trail corridor, constructed west of the park. No specific trail location has been sited. The snowmobile trail would likely be constructed almost entirely outside of the existing park boundaries and would support two-way snowmobile traffic. Under this alternative the trail would traverse the west and north slopes of Blue Mound from the Military Ridge State Trail to the county trail system north of the park. DNR does not own land where most or all of this

alternative's trail would be located. This alternative would likely require the BMSP project boundary to be expanded if any of the trail were to be on DNR lands.

Alternative 4: Status Quo (No Action)

Under the Status Quo alternative, snowmobiling would continue to be authorized only within the portion of the Mounds Park and Ryan road rights of way that are not traveled by motor vehicles. This area is the unpaved portion of the right of way where snowmobiling currently occurs. The snowmobile route would continue to follow Mounds Park and Ryan roads to connect the Military Ridge State Trail and the county trail system north of BMSP.

Alternatives Considered but Dismissed

East side trail

During the alternatives development process, the DNR planning team evaluated the possibility of a snowmobile trail that would connect the Military Ridge State Trail to the county snowmobile trail system north of the park by travelling east of the park. This alternative would have required landowner willingness to host a trail or sell property or easements for the snowmobile trail. Additionally, crossing Ryan Creek was identified as a challenge that would need to be addressed should the east side trail be proposed. The Ryan Creek crossing evaluated would have occurred at a different location than the crossing in the preferred alternative. After consulting with landowners in the affected area and identifying the Ryan Creek crossing as an issue, the DNR planning team dismissed this route as a viable option.

Two one-way trails on either side of Mounds Park and Ryan roads

The planning team also considered an option to develop two one-way snowmobile trails along Mounds Park and Ryan roads. Trail users would travel in the same direction as traffic, allowing for the trail to be closer to the road than 40 feet and potentially limiting the impacts to other recreational facilities. After evaluating the path of travel under this option, the planning team determined the trails would often be more than 40 feet from the road due to terrain obstacles. The alternative was removed from consideration as the trails would be more costly and create additional intersections with nonmotorized trail uses without realizing the benefits of being closer to the road.

No Snowmobiling in BMSP

The planning team also evaluated the option of closing the current snowmobile route. The legislature has provided, through s. 350.02, Wis. Stats., that snowmobiles can be operated along town highways outside of the roadway. This means that snowmobiles may operate adjacent to Mounds Park and Ryan roads next to the roadway (i.e., on the road shoulders) regardless of what the department includes in its plan. As part of management alternative development, the department evaluated ownership of the current snowmobile route on the Mounds Park and Ryan road rights of way. The department concluded that the Town of Brigham has an easement for road purposes but DNR maintains fee-title ownership of lands underlying both Mounds Park and Ryan roads. Since the department owns fee title to the lands under and adjacent to Mounds Park and Ryan roads, it may manage the uses that occur on these lands in a manner that does not interfere with the town's roadway easements. The department can accommodate

snowmobile traffic farther from the roadway, or people can choose to ride their snowmobiles next to the roadway.

The department prefers to maintain existing uses of the park and support connections to other recreation opportunities outside the park when possible. Thus, an alternative of no longer allowing any snowmobile connection route within BMSP was dismissed as an alternative for the draft master plan. The department anticipates discouraging snowmobiling along the roadway if the proposed snowmobile trail is approved.

Alternate West Slope Trail - Outside project boundary

A snowmobile trail similar to Alternative 3 was submitted via public comment as a possible trail solution until sufficient land could be acquired to develop the trail described in Alternative 3. Department staff assessed the trail submitted and determined that the trail would be outside the department's existing and proposed project boundaries, and thus was outside of this project's scope. While the trail submitted through public comment may still be pursued by partners, the department dismissed this proposed trail as an alternative for this master plan.

Comparison of Effects

All snowmobiling alternatives that were not dismissed would connect to existing snowmobile trails outside of the park. Alternatives 1 - 3 would provide a more desirable snowmobiling experience. Alternative 1 would keep snowmobiles near Mounds Park and Ryan roads where snowmobiles currently operate. By keeping snowmobiling in an area already travelled by snowmobile and other motorized vehicles, this alternative offers the opportunity to improve the snowmobiling experience while keeping conditions close to status quo.

During the public involvement periods held while drafting this plan, nonmotorized and motorized trail crossings were a subject of concern. Alternative 2 (preferred alternative) and Alternative 3 offer the opportunity to establish a snowmobile trail connection with few intersections with nonmotorized recreation trails. See the Effects on Other Recreation section (page 90) for more information. Alternative 2 relies heavily on a former service road, which would also result in lower construction costs and less impact to vegetation. Alternative 3 offers the opportunity to improve the snowmobiling experience while connecting Military Ridge State Trail to the county trail system north of the park without utilizing areas currently within park boundaries. This creates the opportunity to establish a snowmobile trail with little to no impact on existing uses.

Connection of the Military Ridge State Trail with the county trail system north of the park through any of the four alternatives maintains a component of the larger county snowmobile systems in Dane and Iowa counties. The connection through the BMSP is a small portion of an approximately 40-mile loop of snowmobile trails that connects the communities of Blue Mounds, Black Earth, Cross Plains and Mount Horeb. Alternatives 1, 2 and 3 would maintain this connected loop while enhancing the riding experience through and near the park. The status quo alternative would maintain the connection of the county snowmobile trail system while not creating additional impact on other recreational activities at the park. Additionally, the status quo is not anticipated to require construction and would therefore have fewer impacts.

Impacts may occur during both snowmobile trail construction and during trail maintenance and use. Impacts from snowmobile trail construction would depend on the final siting of any trail. Under Alternatives 1 - 3, construction of the snowmobile trails would follow standard department trail construction procedures. Alternative 4 would not involve construction impacts. Any impacts associated with snowmobile trail use would mainly occur during the portions of the winter season when an adequate amount of snow is present for snowmobile trails to be open. In Dane County, snowmobile trails are only open between December 1st and March 31st when the temperature is a steady 32 degrees Fahrenheit and at least six inches of snow is on the ground (Dane County, 2017). A general description of vegetation, wildlife and soil, sound, emissions, visual, and socioeconomic effects follow this section.

Potential Vegetation, Wildlife and Soil Effects

Initial construction effects under Alternatives 1 and 3 may include loss of trees or other vegetation, soil compaction, minor erosion and minor impacts to wildlife due to noise. Alternative 3 is likely to have effects on the large forest blocks beneficial to forest interior birds. The nature of this impact would depend on the final siting of the trail. Maintenance of canopy coverage in the forest block areas would be considered during trail siting on DNR lands. Under Alternative 1, minimal effects on forest cover and forest interior birds are anticipated as the trail would occur along an existing forest edge. Similarly, little to no impact on forest cover is expected under Alternative 2 as it largely utilizes an existing service road through forested areas. Any vegetation and soil impacts resulting from construction of Alternative 2 would occur in brush or grassland areas or near the existing disturbed area along Ryan Road.

The trail in Alternative 2 is near the headwater areas of Ryan Creek, a Class II trout stream, and crosses the stream twice using existing culvert bridges. Erosion control techniques and all permitting required will be implemented during any trail improvement that is needed and during trail maintenance to limit impacts to this resource.

After initial trail construction, environmental impacts would be associated with trail maintenance and use under all alternatives. Trail maintenance may involve brushing and mowing activities during the growing season. While this would affect the vegetation on the trail bed, surrounding vegetation is unlikely to be impacted. During winter months, when an adequate amount of snow is present, trail grooming equipment may be used in areas allowed by the department's maintenance agreement. Brushing, mowing and grooming equipment may cause minor disturbances to wildlife. When the trail is open, snowmobile use may cause wildlife to avoid the trail area. The proposed trail is not expected to have greater wildlife impacts than other areas of the extensive snowmobile trail system in Dane and Iowa counties.

Potential Effects of Emissions

Under all alternatives, snowmobile use would cause exhaust emissions. These emissions are expected to be similar to the emissions generated by snowmobiles currently passing through BMSP and elsewhere on the extensive snowmobile trail systems in Dane and Iowa counties. Park visitors would likely encounter emissions from snowmobiles in Alternatives 1 and 4 that are similar to existing conditions. Under Alternatives 1 and 4, the snowmobile trail or route would continue to be near Mounds Park and Ryan

roads, which are frequently traveled by other, emissions-generating motorized vehicles. Snowmobiles are not anticipated to noticeably add to the emissions already emitted by current uses in these areas.

Alternatives 2 and 3 would introduce motorized recreation, and therefore emissions, to new areas. Mountain bike trail users may briefly encounter emissions from snowmobiles on the Alternative 2 trail where it crosses mountain bike trails. Cross-country skiers on the park's groomed ski trails are unlikely to directly encounter emissions under these alternatives. Any emissions encountered would be similar to those currently encountered from snowmobiles and other existing roadway uses. Under Alternative 2, visitors snowshoeing or hiking may encounter emissions when utilizing the trails in Pleasure Valley that are near the former service road. This includes the proposed relocation of a portion of the Weeping Rock Hiking Trail (see Map E). Alternative 3 impact areas are not currently part of the park and therefore have no existing park uses. Park users within the current boundaries are unlikely to encounter new emissions associated with snowmobiles under Alternative 3.

Aesthetic Effects

Effects on the overall aesthetics of the park are likely to be low under any of the alternatives. In areas where any of the alternatives cross grasslands, little change to aesthetics is expected. Aesthetic impacts from clearing of other vegetation will be minimized when possible. The trail in Alternative 1 would require the clearing of some trees, which would be noticeable. However, the overall aesthetic would be minimally changed as the trail would appear to be a continuation of the roadway corridor clearing. In areas where the trail would be screened from the roadway, the snowmobile trail would not be obvious unless crossing it on a different trail. Alternative 2 would similarly have few aesthetic impacts as it relies on an existing service road to cross through forested areas. Alternative 3 would not be visible to users of the current park facilities and would have no impacts on the existing aesthetic. Alternative 4 would continue the current route and not result in changes to the existing aesthetic.

Under all alternatives, visitors are unlikely to see snowmobiles using the trail, except for brief periods of time (i.e. when a snowmobile passes a trail crossing), or when in close proximity to the trail. Visitors utilizing the Weeping Rock Hiking Trail when the snowmobile trail is open are most likely to see snowmobiles using the trail.

Sound Effects

To gain an understanding of the nature of snowmobile sound effects on BMSP, DNR commissioned a snowmobile sound analysis. The results of this analysis are in the draft report *Sound Level Analysis of Snowmobiles at Blue Mound State Park*, which is available on the BMSP Master Plan website.

This document and its associated maps show the different sound impact areas associated with each alternative and describe the alternatives in relation to introduction of a new type of sound, additional volume of sound in an area, and the rate of occurrence of new sounds. Past efforts by DNR and other agencies (USFS, 2011) (WDNR, 2013) suggest these are useful factors to consider when evaluating potential sound impacts associated with the snowmobile alternatives.

As noted on page 64, the sound level analysis suggests:

- The furthest extent of “possibly noticeable and identifiable snowmobile noise” is approximately 3,000 feet from the trail. This corresponds to sound that is at least 3 decibels above ambient and which has particular signature frequencies.
- The range of impactful snowmobile noise is up to 700 feet from the trails. Impactful snowmobile noise is defined as that which is 15 dBA above ambient.

See page 65 for more details regarding these sound levels at BMSP.

Currently, under the Status Quo Alternative, snowmobile sound is present in BMSP. It would remain present under all alternatives. Under Alternative 1 there would be little change in the areas of the park that experience snowmobile sound. Under Alternatives 2 and 3, new areas of the park would likely experience snowmobile sound. Table 5.1 shows the acres and percent of BMSP that may be exposed to the possibly audible and impactful sound levels described in the sound analysis report for each alternative. Using the metrics provided by the sound analysis report as a basis, the preferred alternative, Alternative 2, would decrease the percentage of the park exposed to these sound levels relative to the Status Quo Alternative. Figure 4.1 (page 66) shows the areas of the park that would be impacted by the proposed trail. Sound level impact areas for Alternatives 1, 3, and 4 are shown on Figure 5.2 and Figure 5.3.

Table 5.1. Acres and percent of BMSP likely to experience possibly audible and impactful snowmobile sound under each alternative.

Alternative	Acres of BMSP expected to experience snowmobile sound at <i>possibly audible</i> dBA level	Percentage of BMSP expected to experience snowmobile sound at the <i>possibly audible</i> dBA level		Acres of BMSP expected to experience snowmobile sound at <i>impactful</i> dBA level	Percentage of BMSP expected to experience snowmobile sound at the <i>impactful</i> dBA level
Mounds Park – Ryan Road Connector Trail	787	69%		258	23%
Service Road Trail (Preferred)	721	63%		219	19%
West and North Slope Trail	676	59%		93	8%
Status Quo (No Action)	795	70%		268	23%

Wise Associates also provided a useful spreadsheet as part of the sound analysis report for determining the duration of snowmobile sound at a certain distance from the snowmobile trails. Table 5.2 shows the expected duration of sound at the impactful level from a single snowmobile on the proposed trail from three locations in BMSP (as shown on Figure 4.1):

- Point 1 is the Friends Shelter

- Point 2 is the north intersection of the cross-country ski trails and Mounds Park Road.
- Point 3 is the closest location of the cross-country ski trails to the proposed snowmobile trail (Alternative 2).

Table 5.2 Seconds above impactful dBA level by alternative and points shown on Figure 4.1

Alternative	Seconds above impactful dBA level (15 dBA above ambient)		
	Point 1	Point 2	Point 3
Mounds Park – Ryan Road Connector Trail	0	17	2
Service Road Trail (Preferred Alternative)	0	0	10
West and North Slope Trail	0	0	0
Status Quo	0	17	0

This table was generated using a spreadsheet provided to DNR by Wise Associates. The spreadsheet is available on the BMSP Master Plan website. The distance entered into the spreadsheet was the closest distance between the point and the alternative trail. The snowmobile speed entered was 25 miles per hour. The numbers shown in this table represent the output for a single snowmobile.

The spreadsheet assumes sound level is a maximum of 78 dBA at 50 feet away from a snowmobile moving at 60 m.p.h. and reduces volume by speed correction factor as well as attenuation from distance. It does not account for ground and air absorption, which may further reduce sound levels.

The trails in Alternatives 1 – 3 are likely to be more desirable to snowmobile riders. It is reasonable to assume that a more desirable trail would draw additional users. If so, areas impacted by snowmobile sounds from use of the proposed trail may experience these sounds as frequently as areas of the park impacted by the Military Ridge State Trail.

Effects on Other Recreation

Potential effects of a snowmobile trail in BMSP on other recreation facilities, especially related to intersections of snowmobile and nonmotorized trails, have been a topic of public interest. Table 5.3 shows the number of times each snowmobile trail alternative would cross the trails in the mountain bike and cross-country ski alternatives. Mountain bike trails are included because they are often used for winter bicycling.

The service road proposed as a trail in the preferred alternative currently serves as a hiking trail when there is no snow cover and is utilized by snowshoers when it is snow covered. As shown on Map E, the snowshoe use of this trail is proposed to be relocated to create a more cohesive trail loop from an existing trailhead. Snowshoeing, as a pedestrian activity, may occur anywhere on the property. Thus, limiting the

use of this trail when snowmobile trails are open in Dane County would not greatly impact the overall snowshoeing opportunity level.

Table 5.3. Number of nonmotorized and snowmobile trail crossings for each alternative

Trails	Cross-Country Ski Status Quo	Cross-Country Ski Alternative 1	Mountain Bike Status Quo	Mountain Bike Alternative 1
Snowmobile Alternative 1	2	1	1	0
Snowmobile Alternative 2	0	0	2	2
Snowmobile Alternative 3	0	0	0	0
Snowmobile Alternative 4	2	1	0	0

Economic Impacts

The status quo route is not maintained by DNR and its selection would have minimal to no fiscal impact. The main costs associated with Alternatives 1 and 2 are snowmobile trail construction costs. The longer the trail that needs to be constructed, the higher the construction costs. Thus, Alternative 1 is likely to have higher construction costs than Alternative 2 given that Alternative 2 relies largely on an existing service road for much of its length. Under Alternative 2, the proposed construction of a new section of hiking and snowshoeing trail to maintain connection for these activities would create costs. Alternatives 1 and 2 would likely be sited entirely on land currently owned by the State of Wisconsin and would not require the department to acquire land. Alternative 3, as conceptually drawn, is the longest trail and would require construction. Alternative 3 would not likely utilize any existing public land and thus, any land acquisition would have costs. Completion of Alternative 3 is likely to have the greatest fiscal impact of the snowmobiling alternatives. Local snowmobile clubs would be tasked with funding the construction and maintenance of the trails under all alternatives.

Social Impacts

Snowmobiling was a major topic in the public input received during this and past BMSP planning efforts. The input received was both in favor of and against developing a snowmobiling trail outside of the current route. Alternative 2 was selected as the preferred alternative as it addressed many of the concerns described in the public comments.

Nevertheless, selection of any of the alternatives, including the status quo, is likely to have social impacts. Motorized recreation activities are asymmetrical in their social impacts (Adelman, Heberlein, & Bonnicksen, 1982) (Lime, 1975) (Lucas, 1964) (Vitterso, Chipeniuk, Skar, & Vistad, 2004). Snowmobilers tend to accept other uses while those opposed to snowmobiling near their recreational activity may have negative reactions to snowmobiles. Park users that are not snowmobiling may choose to recreate elsewhere or utilize different trails. Thus, selection of any of the snowmobile alternatives is likely to cause concern among those opposed to snowmobiling in BMSP. Similarly, selection of the status quo, which is

not considered an enjoyable route, or removal of snowmobiling from BMSP are likely to result in concern from snowmobilers.

Nationally, participation in snowmobiling is trending downward. By 2030, general participation in snowmobiling is expected to decline by 10%. Snowmobiling is dependent on favorable weather to maintain an adequate level of snow cover during winter months. When climate change is factored into participation models, a 39% decrease in total participation days is expected nationally (White, Bowker, Askew, Langner, & English, 2016). If this decrease occurs, a smaller user base may limit the ability of DNR and its partners to develop and maintain the trail. The preferred alternative was selected in part due to the fact that it minimizes the trail construction and maintenance needed compared to Alternatives 1, 3, and 4.

Public Input

The public input received on the snowmobiling alternatives was summarized in the Blue Mound State Park Master Plan Management Alternatives Public Input Summary. That summary is repeated here.

The snowmobiling alternatives drew more comments than any other topic. Those that selected Alternative 1 as their preferred alternative noted that it removed snowmobiles from the unpaved portions of the roadway while keeping them near the existing road corridor. Some commenters that preferred Alternative 1 also noted that this alternative was close to the status quo while offering an improved snowmobiling experience.

Those supporting Alternative 2: Service Road Trail often noted that the trail in this alternative does not intersect with cross-country ski trails. Comments in support of Alternative 2 frequently discussed the existing infrastructure the trail would be sited on and the limited cost and construction needed to open this trail to snowmobile use. Many commenters that preferred Alternative 2 noted their view that this trail is a safe alternative. Others commented that Alternative 2 is near the location of the snowmobile trail that operated until the 1990s and that it would be a scenic trail.

Those that chose Alternative 3: West and North Slope Trail as their preferred alternative often discussed this alternative as a solution that may work for both snowmobilers and those who prefer to not have snowmobiling present in BMSP. Other comments supporting Alternative 3 noted its limited impact on other park activities and as a solution to the snowmobile sound and trail crossing concerns noted by some commenters.

Commenters that selected Alternative 4: Status Quo as their preferred alternative frequently noted that the status quo currently makes the desired connection between the Military Ridge State Trail and the county trail system north of the park. These commenters often noted that because this connection exists, they did not feel additional snowmobile facilities were necessary or they expressed concern with additional snowmobile activity in the park. Others commented in support of Alternative 4 because they felt resources may be better allocated to other projects.

Environmental concerns with additional snowmobile facility development were also often cited by those that preferred Alternative 4.

Many comments were related to snowmobile access to Blue Mound State Park in general and not related to a specific alternative. Comments in support of snowmobile access to Blue Mound State Park often cited economic benefits to communities, enjoyment of snowmobiling as a recreational activity and support for snowmobile access to public lands in general. Comments against snowmobiling in BMSP frequently expressed concerns about exposure to snowmobile sounds and fumes, safety concerns and their view that BMSP is a park that should be dedicated to nonmotorized activities. Others discussed environmental concerns, including invasive species spread and habitat loss.

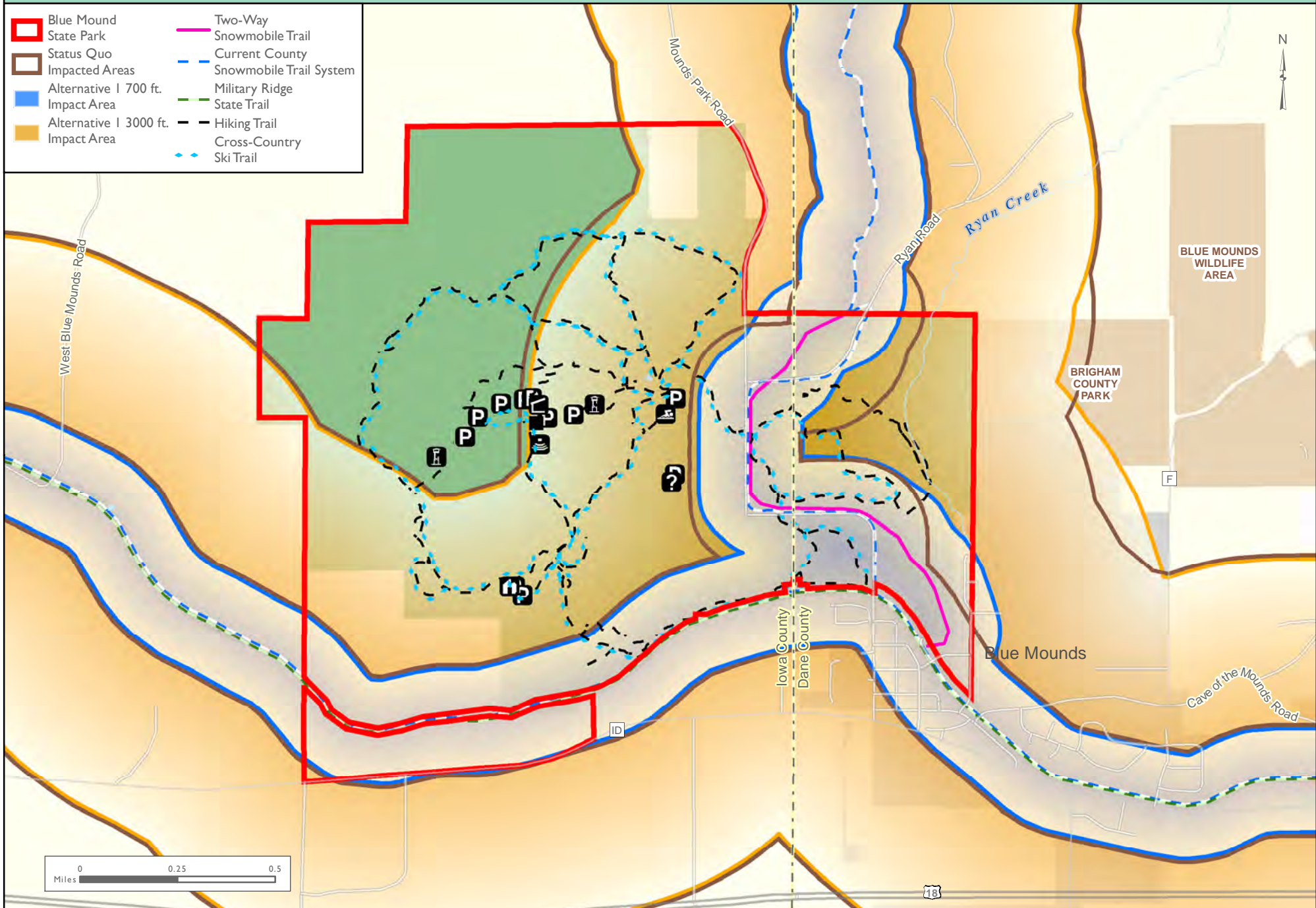
Additionally, the Nonmotorized Recreation and Transportation Council noted its support for Alternative 2 at its December 2019 meeting.



Image 5.1. Winter overlook at BMSP. Photo by Kevin Swenson.

Approximate Sound Impact Area - Alternative I

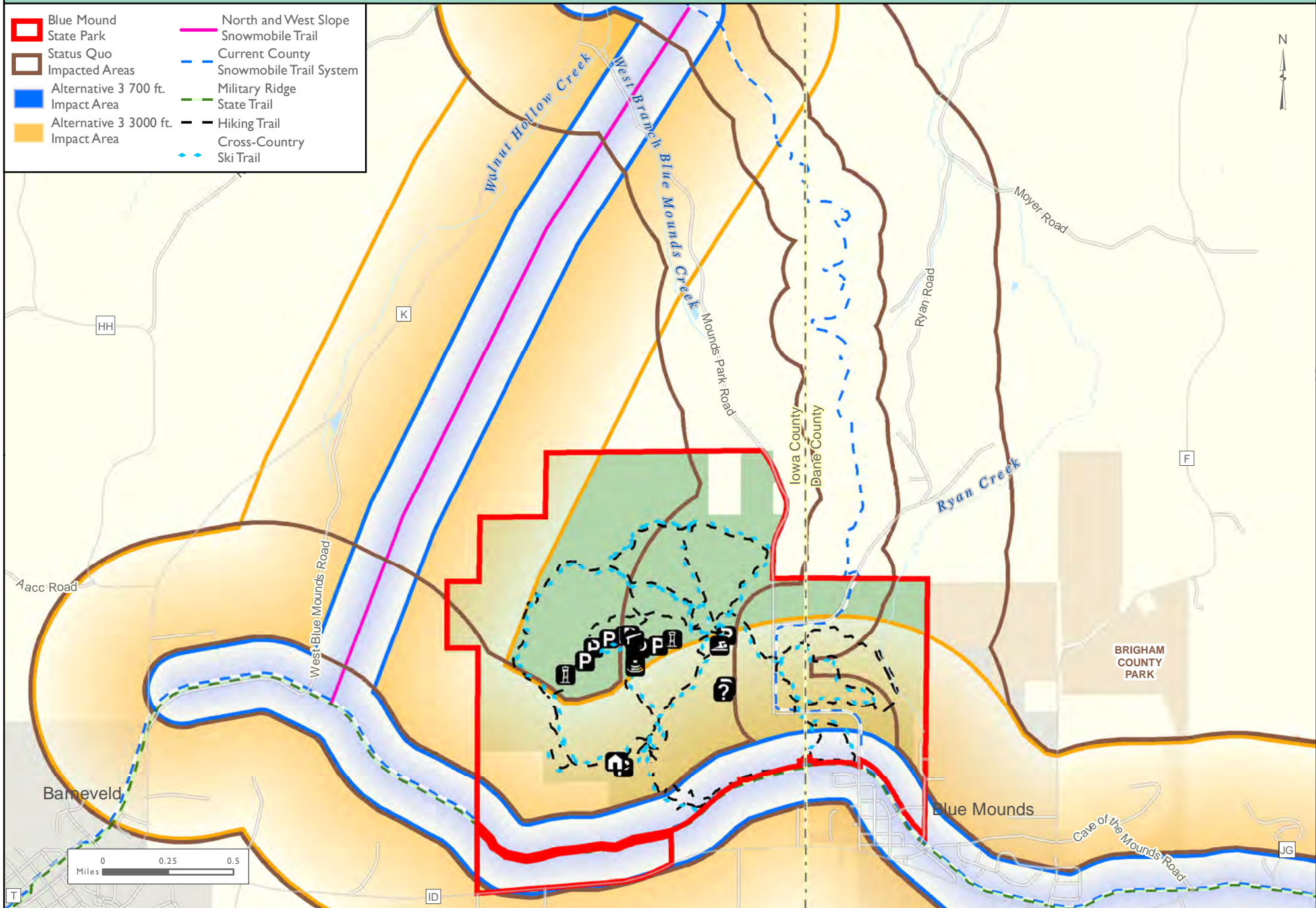
Figure 5.2. Approximate Sound Impact Areas for Snowmobile Alternative I Trail and Status Quo Route



The data shown on this map have been obtained from various sources, and are of varying age, reliability and resolution. This map is not intended to be used for navigation, nor is this map an authoritative source of information about legal land ownership or public access. Users of this map should confirm the ownership of land through other means in order to avoid trespassing. No warranty, expressed or implied, is made regarding accuracy, applicability for a particular use, completeness, or legality of the information depicted on this map.

Approximate Sound Impact Area - Alternative 3

Figure 5.3. Approximate Sound Impact Areas for Snowmobile Alternative 3 Trail and Status Quo Route



The data shown on this map have been obtained from various sources, and are of varying age, reliability and resolution. This map is not intended to be used for navigation, nor is this map an authoritative source of information about legal land ownership or public access. Users of this map should confirm the ownership of land through other means in order to avoid trespassing. No warranty, expressed or implied, is made regarding accuracy, applicability for a particular use, completeness, or legality of the information depicted on this map.

HIKING

Hiking is allowed throughout BMSP, except on groomed cross-country ski trails, throughout the year.

Alternatives Considered

Status Quo (No Action)

Under the no action alternative, the current hiking trail system would be maintained with no additional trails authorized.

Status Quo with Future Trails Possible (Preferred)

The selected alternative maintains the current hiking trail system and allows for the development of a connection to the Driftless Trail, should that external project come to fruition. The current hiking experience will remain unchanged.

Comparison of Effects

Few differences exist between the alternatives. If a Driftless Trail connection is eventually developed, effects are likely to be minimal, and will be similar to development of other hiking trails.

HUNTING AND TRAPPING

The majority of the park is currently closed to hunting and trapping. Certain areas of the park are open to hunting and trapping during certain times of the year as designated by the Natural Resources Board.

Alternatives Considered

Status Quo (No Action)

Under the no action alternative, the current areas open to hunting and trapping in BMSP would remain unchanged (See Map H).

Additional Area Open to Hunting (Preferred)

Under this alternative approximately 30 acres would be added to the current area open to hunting and trapping (See Map H).

Comparison of Effects

Socioeconomic impacts associated with either alternative are expected to be minimal. The area proposed to be opened to hunting (Map H) currently has a mountain biking trail that cuts through it. The proposed mountain bike trail system relocates this trail. Once the trail has been relocated, the current trail will be restored to natural conditions and no recreational facilities will be present in the area. Thus, impacts to existing recreation are expected to be minimal. Opening approximately 30 additional acres to hunting and trapping would expand this recreational opportunity in an area where, compared to other areas of the state, public hunting lands are limited.

Environmental effects are similarly expected to be minimal under either alternative. Those impacts that do occur are likely to be positive. The BMSP area is known to have a high deer population, which can lead to over-browsing of the park's vegetation and difficulties in carrying out habitat management objectives. Additionally, BMSP is an area with a high concentration of chronic wasting disease (CWD). Lowering deer

herd numbers may help limit the spread of CWD. Both alternatives contribute to the area's deer herd control.

Issues of Public Interest

Changes to hunting and trapping areas within BMSP were not presented during the management alternatives public input period (see Chapter 6). At that time the planning team had not yet proposed removing all mountain bike trails from the area now proposed to be open to hunting and trapping. This section may be updated as necessary following input received on this BMSP Draft Master Plan.

SNOWSHOEING

Similar to hiking, snowshoeing is allowed throughout BMSP, except on groomed cross-country ski trails.

Alternatives Considered

Status Quo (No Action)

No changes to the snowshoeing experience would occur. The department may still depict desirable snowshoeing routes on BMSP maps (see page 21) and snowshoeing would still be allowed throughout the property, except on groomed cross-country ski trails.

Additional Snowshoe Trail in Pleasure Valley (Preferred)

Under this alternative, a new snowshoe trail is proposed in the Pleasure Valley Management Area (See Map E) to create a more interesting experience and remove snowshoeing from the former service road. The department may depict desirable snowshoeing routes on BMSP maps (see page 21) and snowshoeing would still be allowed throughout the property, except on groomed cross-country ski trails.

Comparison of Effects

Effects resulting from either alternative would be minor. Constructing the new snowshoe trail in the preferred alternative would have effects similar to any other primitive trail building efforts the department has undertaken.

The proposed snowmobile trail (Map E), when open for use, would share a portion of the Weeping Rock Trail with snowshoeing. The department received comments expressing concern regarding this potential trail-sharing between motorized and nonmotorized uses, largely due to safety issues. To address these concerns, a separate snowshoeing trail is proposed to complete the Weeping Rock Trail loop (see Map E). Snowshoeing will continue to be allowed on the proposed snowmobile trail (as it is throughout any DNR property unless posted as closed). However, once completed the additional trail will offer an alternative to trail sharing with motorized uses and would be signed as such. The proposed additional snowshoe trail will remain open to hiking and snowshoeing during periods that the snowmobile trail is not open to snowmobiles.

NATURAL RESOURCES AND LAND MANAGEMENT ALTERNATIVES

Alternatives Considered

Status Quo (No Action)

Under the status quo, the current natural resources management of the park would continue. This management has been largely passive, though management for public safety, to control invasive species and to enhance the quality of grasslands has occurred.

Planned Resource Management (Preferred)

Under the preferred alternative, natural resource management will be more active than the status quo. Natural resources management is described in Chapter 2 of this document.

Comparison of Potential Effects

Impacts of the preferred alternative are described in Chapter 4. General impacts associated with habitat management can be found in the [Impacts of Habitat Management Practices Common Element](#). The habitat management proposed is expected to follow standard department practices.

Under the no action alternative, vegetation management to control invasive species and ensure public safety will continue. Some prescribed burns of grasslands may also occur. Minimal active forest management would take place. Instead natural processes would be allowed to determine the forest type. The use of minimal to no management in areas presently dominated by oak/central hardwood overstory would allow for the natural conversion of these areas to central hardwoods including a significant red maple component. No long-term regeneration of oak stands would be expected. Oak stands are popular features on many DNR lands because of their aesthetic and their habitat contributions. Under the no action alternative, the oak component of BMSP would decline or disappear over the long-term as oak stands succeed to central hardwoods.

Areas presently dominated by northern hardwoods trees, primarily in the Pleasure Valley Management Area, would naturally succeed to northern hardwood managed old-growth forests. The four conifer plantations at BMSP would continue to be passively managed under the no action alternative. This may lead to a further degradation of the quality of these plantations as crowding limits the growth of the trees and causes the understory to die off. Diversity of the vegetation within these plantations would likely remain low.

Public Input

Compared to many of the recreation management topics, few comments have been received on natural resources management. The more active resource management proposed in this plan may lead to concerns related to recreation disruption or loss of habitat. It may also lead to positive feedback as it creates actively managed wildlife habitat.

ADMINISTRATIVE ALTERNATIVES

PROJECT BOUNDARY AND ACQUISITION AUTHORITY

Alternatives Considered

Status Quo (No Action)

Under the status quo alternative for the project boundary, DNR would not be authorized to acquire additional land beyond that currently included in the project boundary.

Other Project Boundary Configurations

During the course of the BMSP planning process the planning team considered a number of project boundary expansion configurations. The project boundary changes presented in the Blue Mound State Park Master Plan Management Alternatives Document was different than that proposed in this plan. The previously presented project boundary included a larger area in Dane County as a shared acquisition area (WDNR, 2019a). The department continues to support Dane County's acquisition of these areas.

Proposed Project Boundary (Preferred)

The proposed BMSP Project Boundary is shown on Map G.

Comparison of Effects

The no action alternative would have minimal fiscal impacts as it is unlikely additional lands would be acquired. As the region's population increases it is expected that BMSP will also see an increase in annual visitors. If the current project boundary is not adequate to support this increase in visitors, the park may experience overcrowding. This, in turn, could create indirect fiscal impacts as potential park entry pass buyers may choose to recreate elsewhere.

Other project boundary configurations would lead to similar impacts as the proposed project boundary.

LAND MANAGEMENT CLASSIFICATIONS

As part of the NR 44 planning process, the department delineates management areas on its properties, each of which is assigned a land management classification. Certain management classifications also require a recreational use setting subclassification to be assigned. Only those land management classifications and recreation subclassifications described in NR 44 may be assigned to a management area.

This plan proposes five land management areas in BMSP. All five of these management areas are proposed to be assigned a classification of recreation management area (NR 44.06(8)). Four of the management areas are proposed to be assigned a Type 3 recreational use setting subclassification (NR 44.07(6)). One, the Day Use and Camping Area, is proposed as a Type 4 recreational use area (NR 44.07(7)).

During the planning process, in response to public input, the department considered different recreational use settings than those proposed in this plan.

Type 1 Recreational Use Setting

The department received a request to consider assigning the Type 1 Recreational Use Setting (NR 44.07(4)) to management areas within BMSP. The objective of a Type 1 Recreational Use Setting is to provide a remote, wild area where the recreational user has opportunities to experience solitude, challenge, independence and self-reliance. This



Image 5.2. Playground at BMSP. Photo by Katie Godding.

recreational use setting was dismissed because the objective, and other requirements of the Type 1 Recreational Use Setting, are not consistent with the existing or proposed conditions at BMSP.

Type 2 Recreational Use Setting

The department also considered assigning certain management areas the Type 2 Recreational Use Setting (NR 44.07(5)). The objective of this setting is to provide a remote or somewhat remote area with little development and a predominantly natural-appearing environment offering opportunities for solitude and primitive, non-motorized recreation. Both the existing and proposed conditions at BMSP do not meet this objective. Thus, the Type 2 Recreational Use Setting was dismissed from consideration for BMSP.

Other Administrative Designations

During the planning process the department received requests to designate BMSP as a “Silent Sports Park,” or as having “Silent Sport Status.” “Silent sports” is a term generally used to describe outdoor recreation activities in which a participant is self-propelled and no motors are used. Existing and current management at BMSP offers a variety of recreational opportunities that fall under the broad categorization of silent sports, including hiking, cross-country skiing and bicycling.

Silent sport status or designation of BMSP as a silent sports park was not considered as a designation assigned under this master plan because these are not listed as land management classifications in NR 44.

CHAPTER 6 : SUMMARY OF THE PUBLIC INVOLVEMENT PROCESS

This chapter summarizes the public involvement process undertaken to this point in the planning process. Two formal public involvement periods have been held. Summaries of input received during both previous public input processes are available on the BMSP Master Plan website. The public review of this draft plan is the third input opportunity. This chapter will be updated following the close of this draft plan public involvement period.

INITIAL PUBLIC INVOLVEMENT

In June 2018, the Wisconsin Natural Resources Board (NRB) approved the DNR recommendation to develop a plan revision to the Blue Mound State Park (BMSP) master plan. The department initiated the plan revision process with an initial public involvement period from February 26 to March 26, 2019.

INITIAL PUBLIC INVOLVEMENT PROCESS

The initial public involvement period aided DNR in identifying pertinent issues, topics and questions that should be addressed in the planning process. Individuals and stakeholder organizations were informed of the public involvement period through:

- A website that contained background information as well as details on the public involvement process.
- An informational item on the NRB's February 27, 2019 meeting agenda. The online agenda also contained a link to the BMSP Master Plan website.
- A link on the Blue Mound State Park homepage to the master plan's website.
- A press release regarding the planning process and public involvement opportunities issued statewide as part of the *DNR Weekly News* packet on February 26, 2019. The press release was forwarded to the 1,742 people on the GovD distribution list used in past planning efforts as well as representatives of 34 organizations DNR identified as potentially having an interest in this planning process. The department's Twitter account also posted the press release.
- Posters advertising the public involvement opportunity were placed at Blue Mound State Park and several local libraries.

The public submitted input through an online public input form posted to the plan's website, email, phone, U.S. mail or a public meeting held March 12, 2019 in Mount Horeb.

PUBLIC MEETING SUMMARY

DNR hosted a public meeting to identify pertinent issues and topics to address during the planning process. The meeting was attended by approximately 320 people and was primarily composed of a series of small group discussions. The questions posed to the group for discussion were:

1. What do you value about Blue Mound State Park?
2. What would improve your experience at Blue Mound State Park?
3. What are the most important questions to address during the master planning process?

Participants were asked to discuss their responses with small groups at their table and write their thoughts on the sticky notes or poster paper available. All attendees were also given the opportunity to fill out and submit a hard-copy public input form at the meeting or send it to the department at a later time.

INPUT RECEIVED

DNR received over 1,800 comments during the public involvement period. The majority of these were received through the online public input form. An additional 595 individual comments were recorded during the small group discussion portion of the public meeting.

MANAGEMENT ALTERNATIVES PUBLIC INVOLVEMENT PERIOD

In Fall 2019, the public had the opportunity to comment on management alternatives for the Blue Mound State Park Master Plan. The management alternatives input period was an additional public involvement step the department offered to gain information for the planning team as it formed the draft master plan.

PUBLIC INVOLVEMENT PROCESS

The intent of the management alternatives public involvement period was to aid DNR in evaluating alternatives, or options, for recreation and grassland and forest management. The DNR planning team created management alternatives for the following topics:

- Project boundary
- Camping
- Cross-country skiing
- Mountain biking
- Snowmobiling
- Other recreation topics
- Forest and grassland management

The BMSP Master Plan website contained background information, the Management Alternatives Document and details on the public involvement process. Additionally, the public was informed of the opportunity to comment on management alternatives through:

- A press release regarding the management alternatives public involvement opportunity issued statewide as part of the *DNR Weekly News* packet on November 5, 2019. The press release was forwarded to the 1,899 people on the Blue Mound State Park Master Plan and the Statewide Master Planning GovD distribution lists. The press release was also forwarded to organizations DNR identified as potentially having an interest in this planning process, local and county governments, and legislative and Wisconsin Conservation Congress contacts.
- A display describing the management alternatives and the input process set up in the Friends Shelter at BMSP.

The public had the opportunity to comment on and review the management alternatives through:

- An online public input form. The online public input form contained an option to utilize an interactive map to view the alternatives as the comment form was completed.

- A hard-copy input form that was available at the park or could be downloaded from the website and sent to DNR via U.S. Mail.
- Email or phone calls to the project's lead planner.
- A public meeting held on November 19, 2019 at Mount Horeb High School.

PUBLIC MEETING SUMMARY

DNR hosted a public meeting to present the management alternatives and discuss them with the public. The meeting, held at Mount Horeb High School, was attended by approximately 130 people and included a presentation on the alternatives followed by an open house.



Image 6.1. Approximately 130 people attended the public meeting held November 19, 2019 at Mount Horeb High School.

During the open house portion of the meeting, attendees had the opportunity to view educational displays and maps, discuss the alternatives with department staff and submit input. Posters with the alternative topics and names were set up throughout the room. Meeting attendees were given red, blue and green sticky notes. During the presentation and open house attendees were asked to write their thoughts on the management alternatives by recording what they liked on green notes, what they did not like on red notes and questions they had on blue notes. They were then asked to place them on the corresponding alternative topic poster. All attendees were also given the opportunity to fill out a hard-copy public input form to submit at the meeting or by U.S. mail at a later date.

INPUT RECEIVED

DNR received approximately 1,073 comment submissions during the public involvement period. The majority of these were received through the online public input form. Approximately 400 individual sticky note comments were also received from the public meeting activity.

DRAFT PLAN PUBLIC INVOLVEMENT

This section will be updated following the conclusion of the Blue Mound State Park Draft Master Plan Public Involvement Period.

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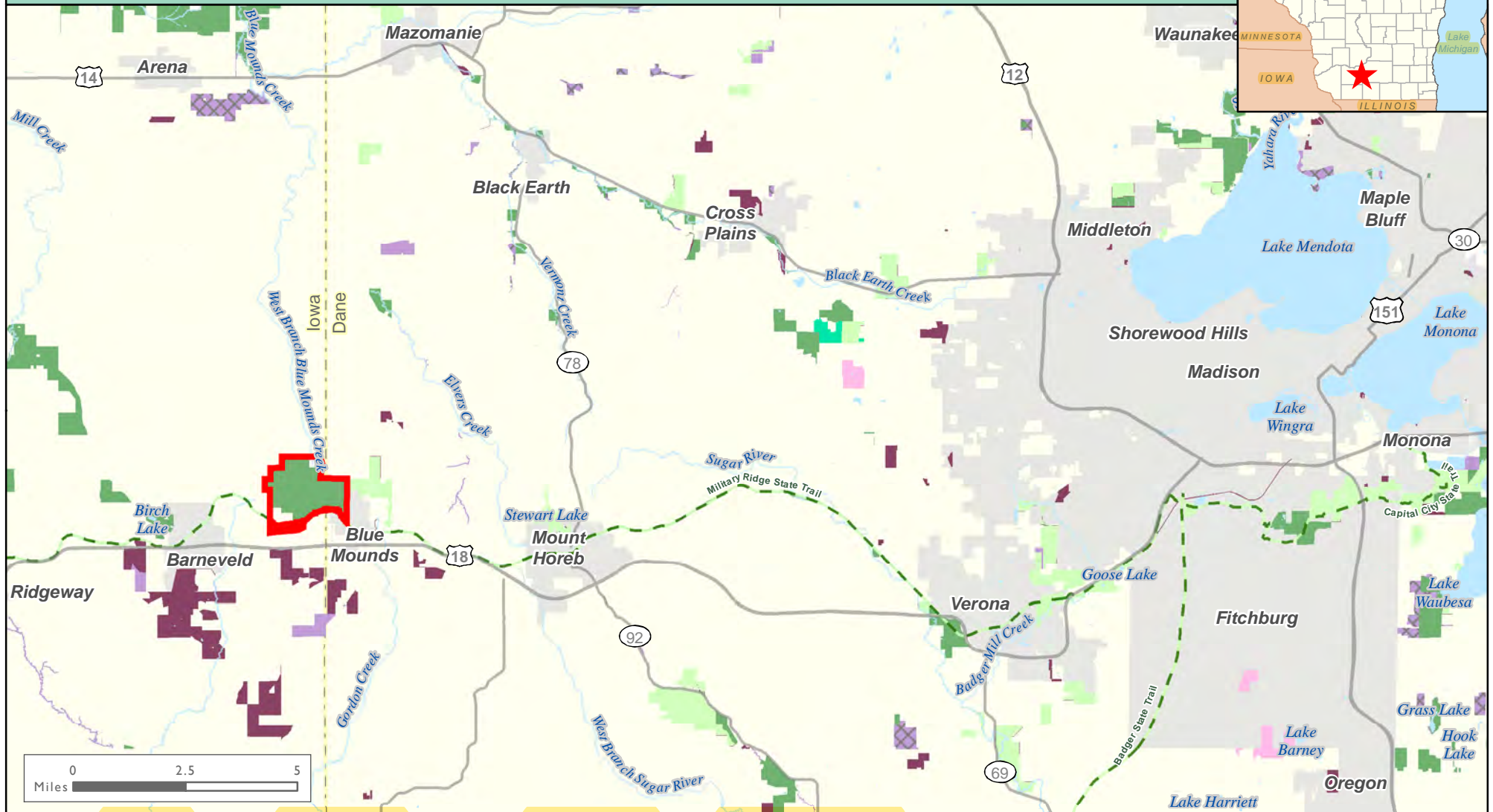
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BLUE MOUND STATE PARK REGIONAL LOCATOR

DRAFT



MAP A

-
- Legend for land ownership and management types:
- Blue Mound State Park
 - DNR Easement (Closed to Public Access)
 - US Fish & Wildlife Service Land
 - Stewardship Grant Lands (Open to Public Access)
 - DNR Fee Title
 - DNR Lease
 - National Park Service
 - DNR Easement
 - County Parks
 - State Recreation Trail

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Bureau of
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Dec 07, 2020

PR-BMSP-9070-MP-A

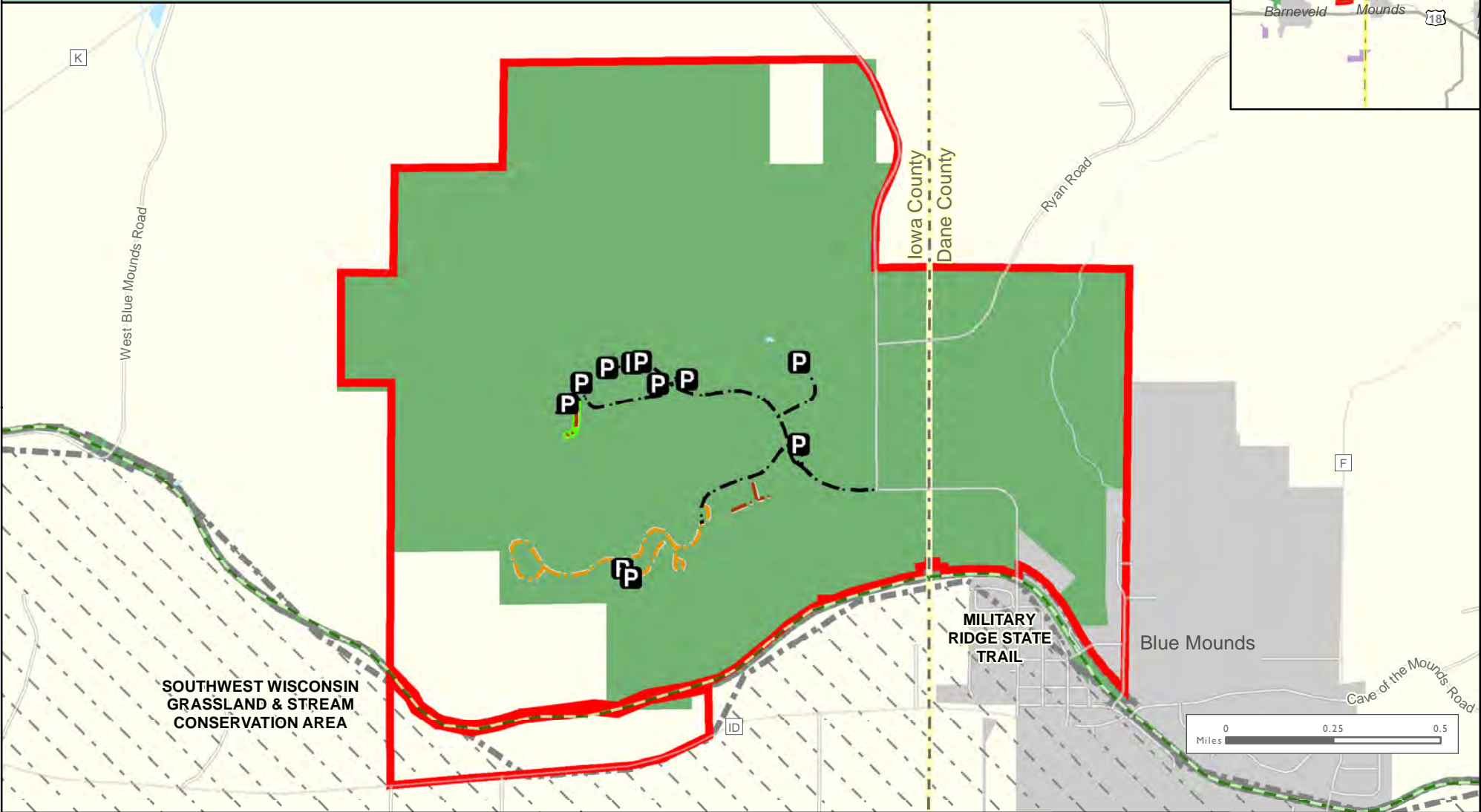
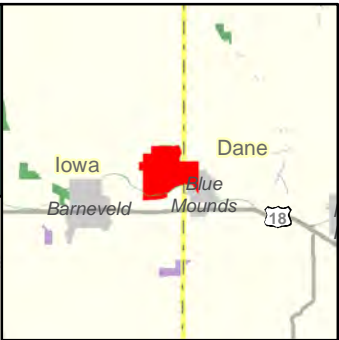
MAP A








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BLUE MOUND STATE PARK

EXISTING ROAD INFRASTRUCTURE

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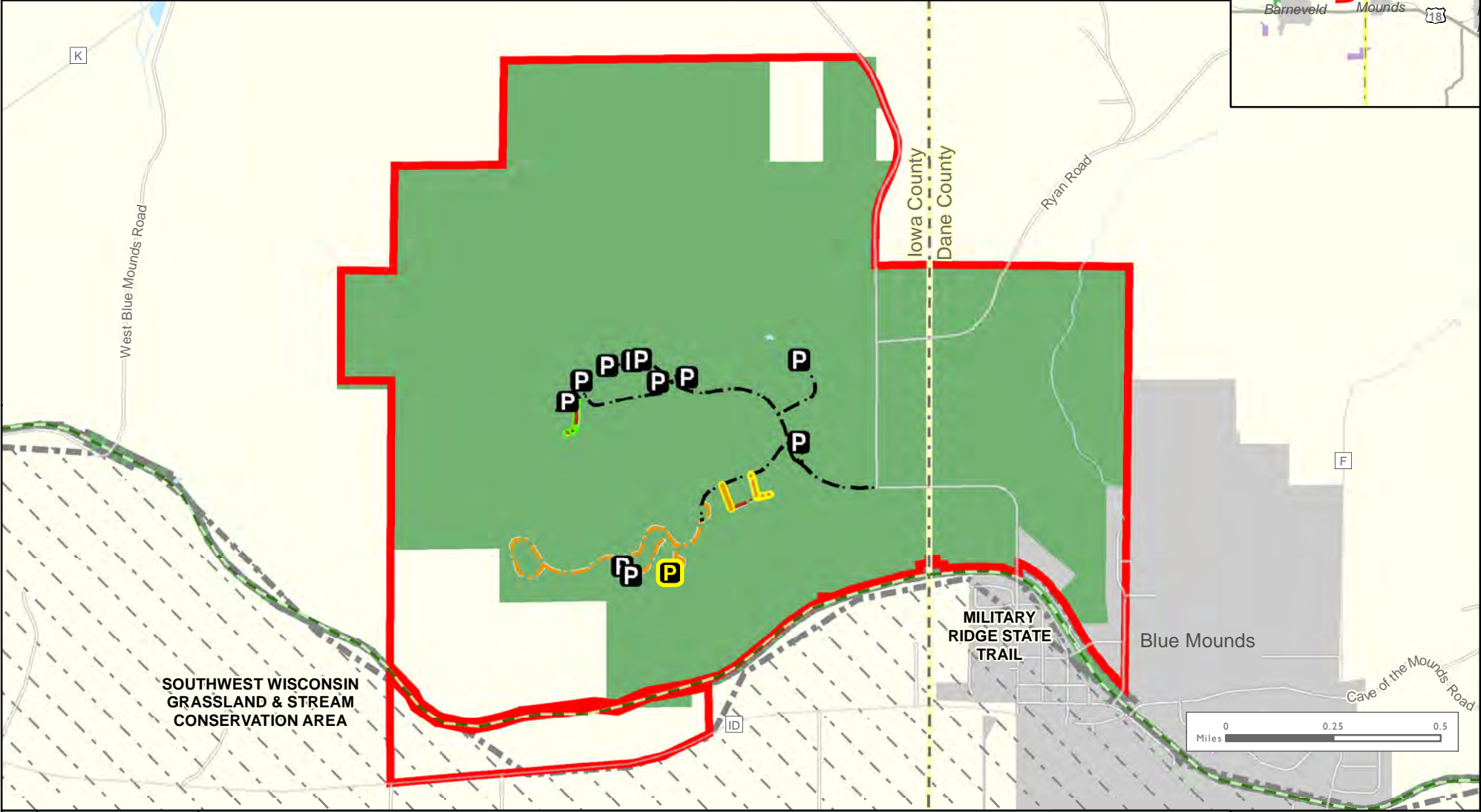
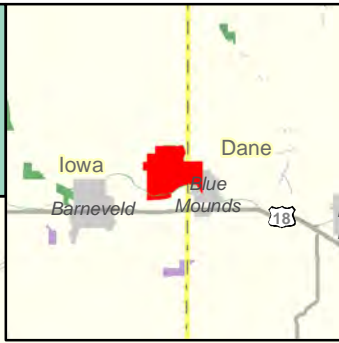


MAP-B	Project Boundary		DNR Fee Title		Road Maintained by the		DNR Roads Key		Motorized Public Use		<div><p>WISCONSIN DEPARTMENT OF NATURAL RESOURCES Bureau of Facilities and Lands May 05, 2020 PR-BMSP-9070-B keg MAP-B</p></div>
	 Blue Mound State Park	 Other Project Boundary	 Parking Lot	 Department of Transportation	 Military Ridge	 State Trail	NR 44 Road Classification		Open = Black	Closed = Red	
							• — • Moderately-developed Road		Seasonal = Orange		
							• • • Primitive Road				

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BLUE MOUND STATE PARK PROPOSED ROAD INFRASTRUCTURE

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MAP-C	Project Boundary	DNR Fee Title	Proposed Fully-Developed, Seasonal Road	DNR Roads Key	
	Blue Mound State Park	Parking Lot	Proposed Road Change from Closed to Open Seasonally	NR 44 Road Classification	Motorized Public Use
	Other Project Boundary	Proposed Parking Lot	Road Maintained by the Department of Transportation	Moderately-developed Road	Open = Black
		Military Ridge State Trail		Primitive Road	Closed = Red
					Seasonal = Orange

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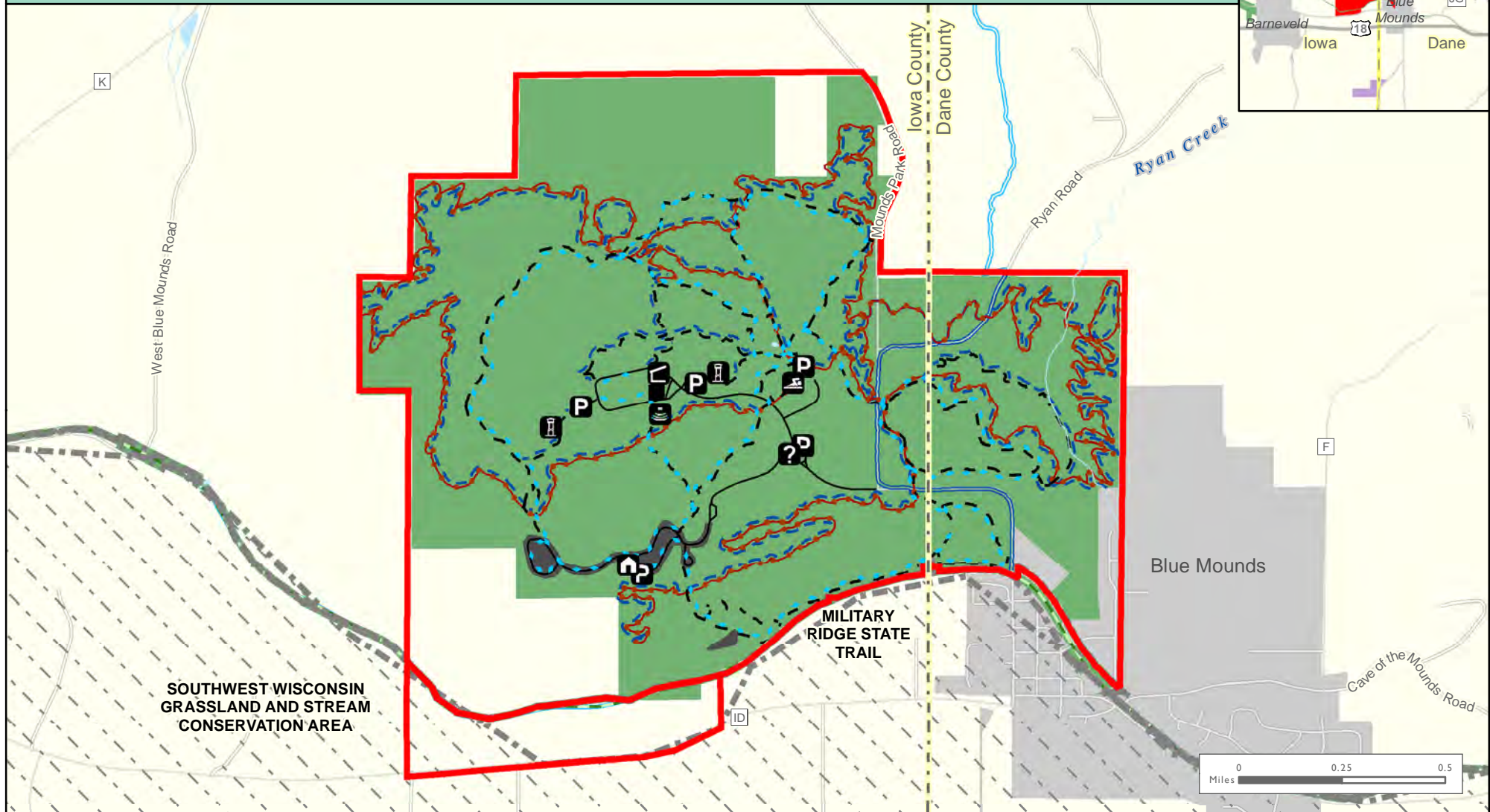
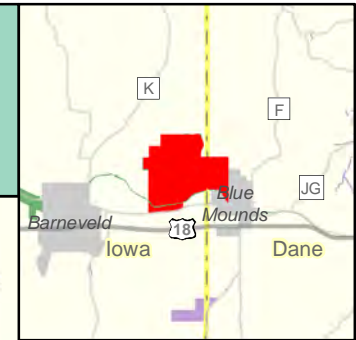
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May 05, 2020
PR-BMSP-9070-C keg
MAP-C

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BLUE MOUND STATE PARK

EXISTING RECREATION INFRASTRUCTURE

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MAP-D	Project Boundary		DNR Fee Title		Snowshoe Trail		Military Ridge State Trail		Friends Shelter		Campground	
	Blue Mound State Park		Cross-Country Ski Trail		Current Snowmobile Route		Parking Lot		Amphitheatre			
	Other Project Boundary		Hiking Trail		Dane County Snowmobile Trail		Mayberry Cabin		Nature Center			
			Mountain Bike Trail		DNR Road Open for Motorized Access		Park Entrance		Observation Tower			
							Pool and Concession					

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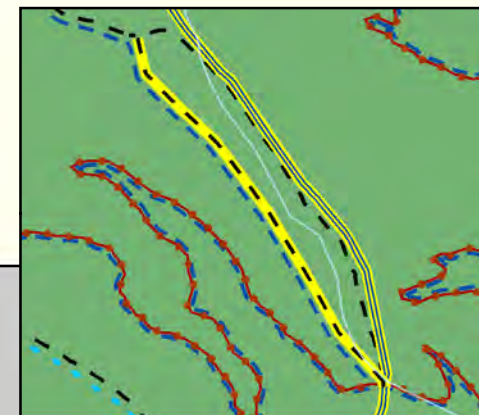
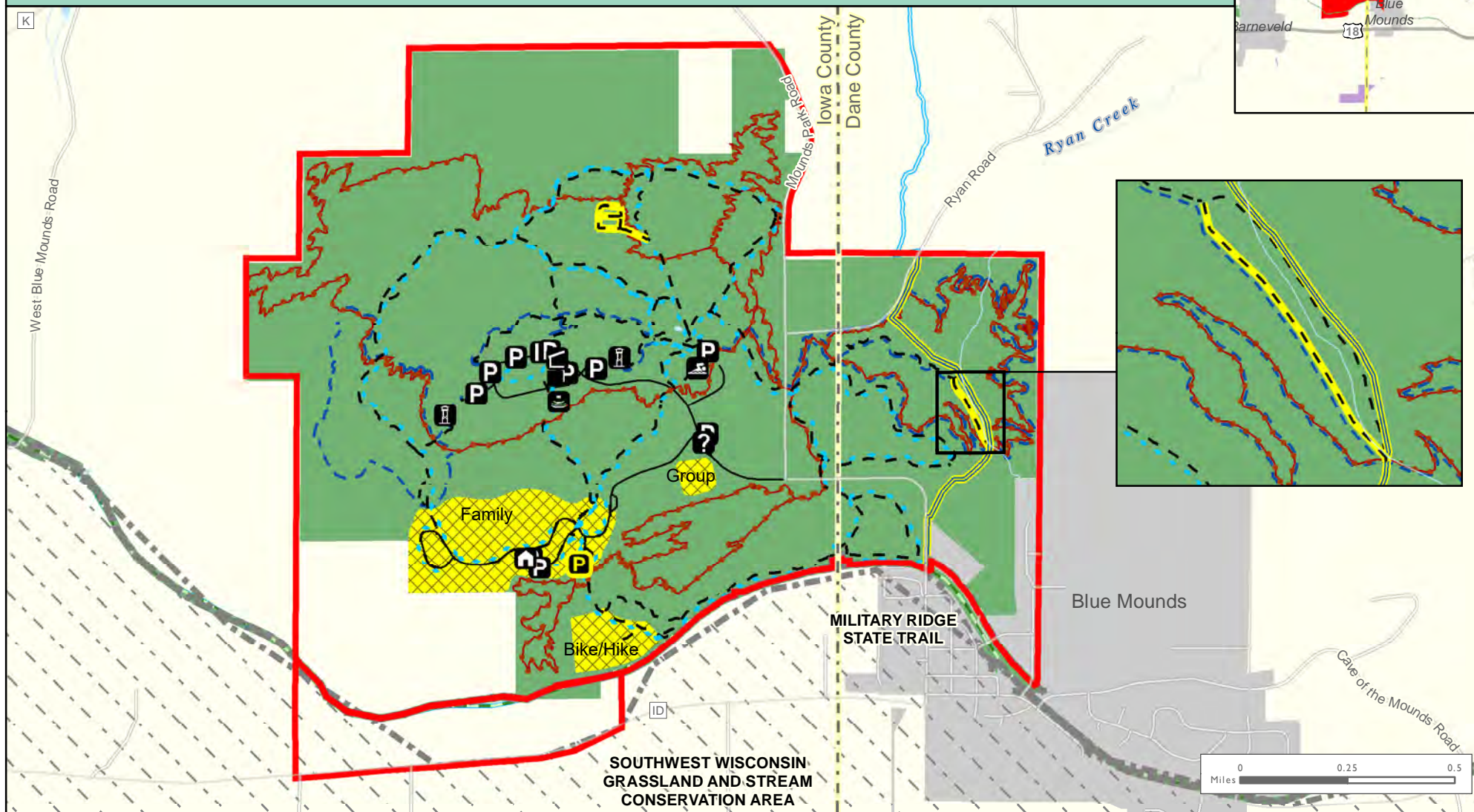
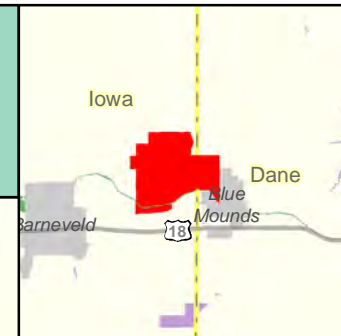
MAP-D



















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BLUE MOUND STATE PARK

PROPOSED RECREATION INFRASTRUCTURE

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MAP-E	Project Boundary		 DNR Fee Title	 Cross-Country Ski Trail	 Proposed Snowmobile Trail	 Proposed Parking Lot	 Friends Shelter	<div>WISCONSIN DEPARTMENT OF NATURAL RESOURCES</div> <div> Bureau of Facilities and Lands Sep 09, 2020</div> <div>PR-BMSP-9070-E keg</div> <div>MAP-E</div>
	 Blue Mound State Park	 Military Ridge State Trail	 Summer Hiking Trail	 DNR Road Open for Motorized Access	 Mayberry Cabin	 Amphitheatre		
	 Other Project Boundary	 Dane County Snowmobile Trail	 Proposed Trail Change	 Proposed Mountain Bike Trail	 Park Entrance	 Nature Center		
		 Proposed Snowshoe Trail	 Proposed Campground Area		 Pool and Concession	 Observation Tower		
						 Parking Lot		

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Bureau of Facilities and Lands
Sep 09, 2020

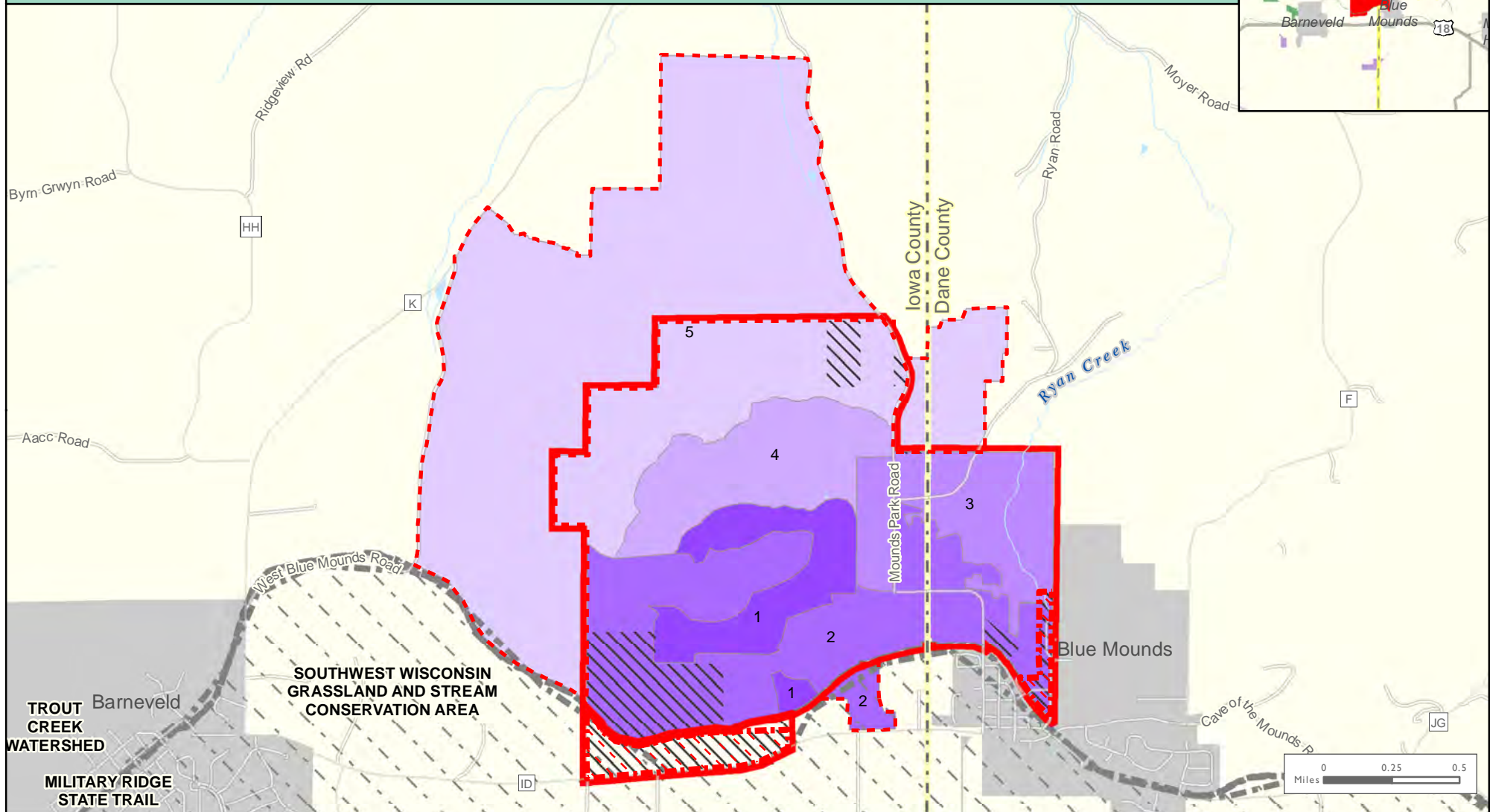
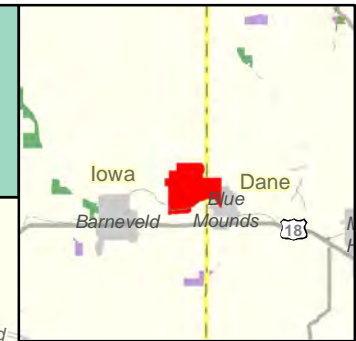
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MAP-E

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BLUE MOUND STATE PARK LAND MANAGEMENT CLASSIFICATION

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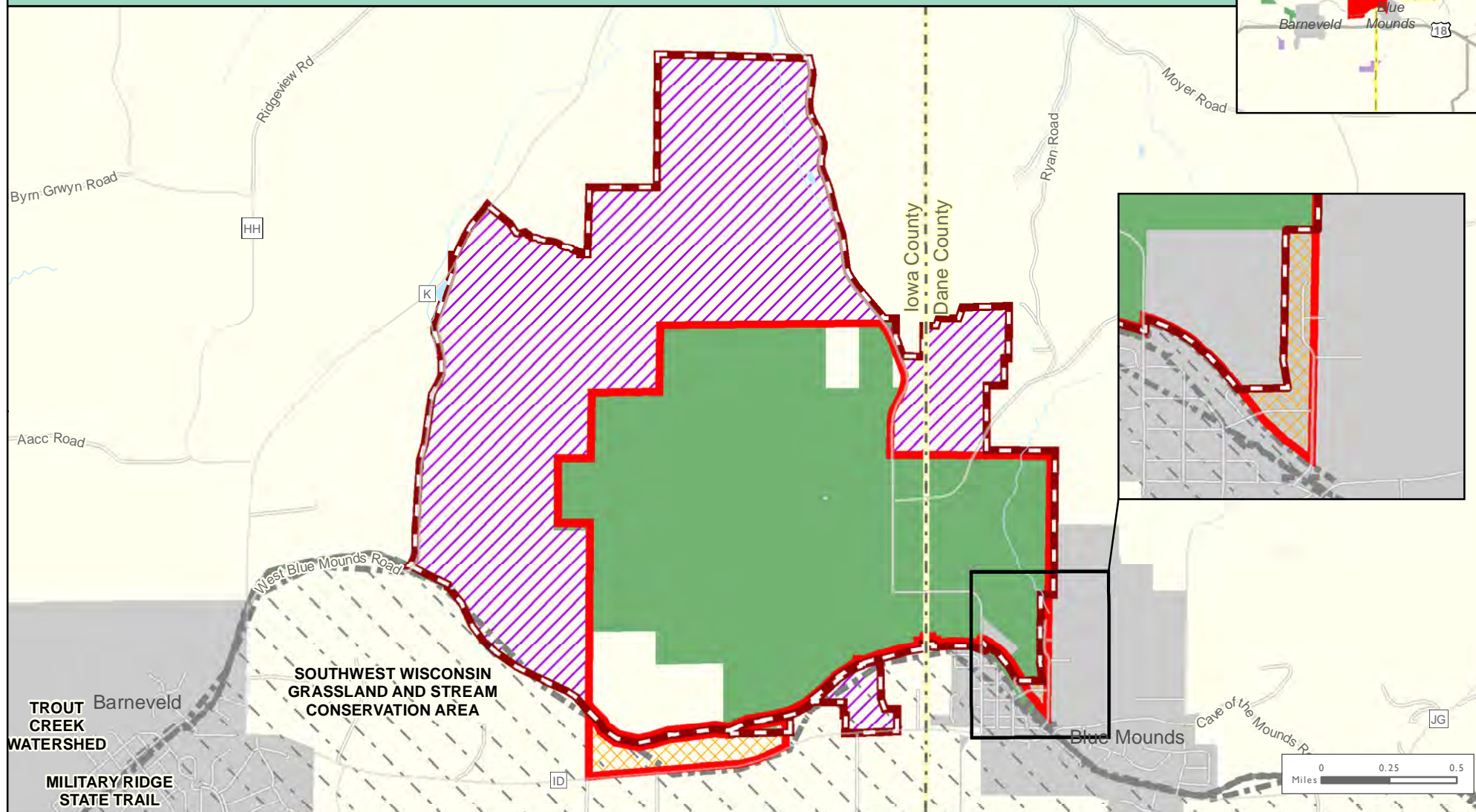
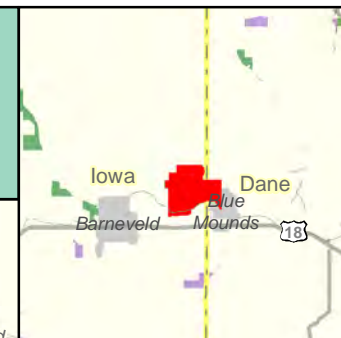


MAP-F	Project Boundary Blue Mound State Park Other Project Boundary	Proposed Project Boundary Expansion Proposed Project Boundary Contraction Not DNR Managed Land	Recreation Management Area Area 1: Day Use and Camping (Type 4) Area 2: Oak Woodland and Prairie (Type 3)	Area 3: Pleasure Valley Hardwoods (Type 3) Area 4: Central Hardwoods Succession (Type 3) Area 5: Oak Management (Type 3)	WISCONSIN DEPARTMENT OF NATURAL RESOURCES Bureau of Facilities and Lands May 07, 2020 PR-BMSP-9070-F keg MAP-F

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BLUE MOUND STATE PARK REAL ESTATE ACTION ITEMS

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MAP-G	Project Boundary	 DNR Fee Title	 Proposed Project Boundary
	 Blue Mound State Park	 DNR Easement	 Project Boundary Expansion
	 Other Project Boundary		 Project Boundary Contraction

WISCONSIN DEPARTMENT OF NATURAL RESOURCES

Bureau of Facilities and Lands

May 06, 2020

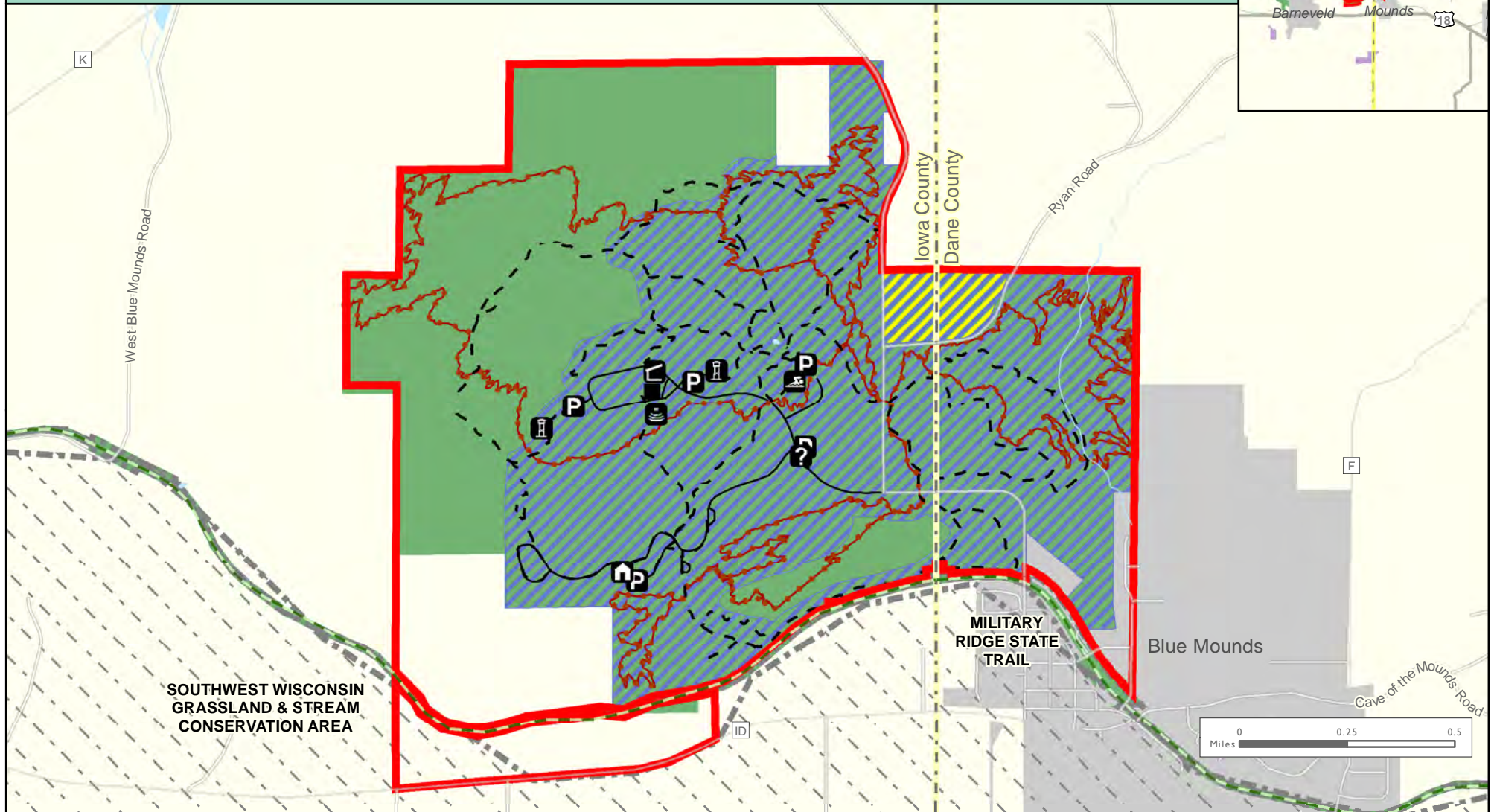
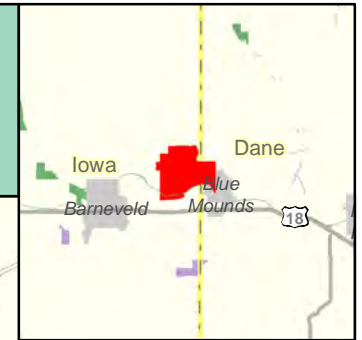
PR-BMSP-9070-G keg

MAP-G

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BLUE MOUND STATE PARK PROPOSED HUNTING AND TRAPPING

DRAFT



MAP-H	Project Boundary	DNR Fee Title	DNR Road Open for Motorized Access	Mayberry Cabin	Amphitheatre
	Blue Mound State Park	Military Ridge State Trail	Area Closed to Hunting and Trapping	Park Entrance	Nature Center
	Other Project Boundary	Proposed Hiking Trail	Area Proposed to be Open to Hunting and Trapping	Pool and Concession	Observation Tower
		Proposed Mountain Bike Trail		Friends Shelter	Parking Lot

WISCONSIN DEPARTMENT OF NATURAL RESOURCES

Bureau of Facilities and Lands

May 05, 2020

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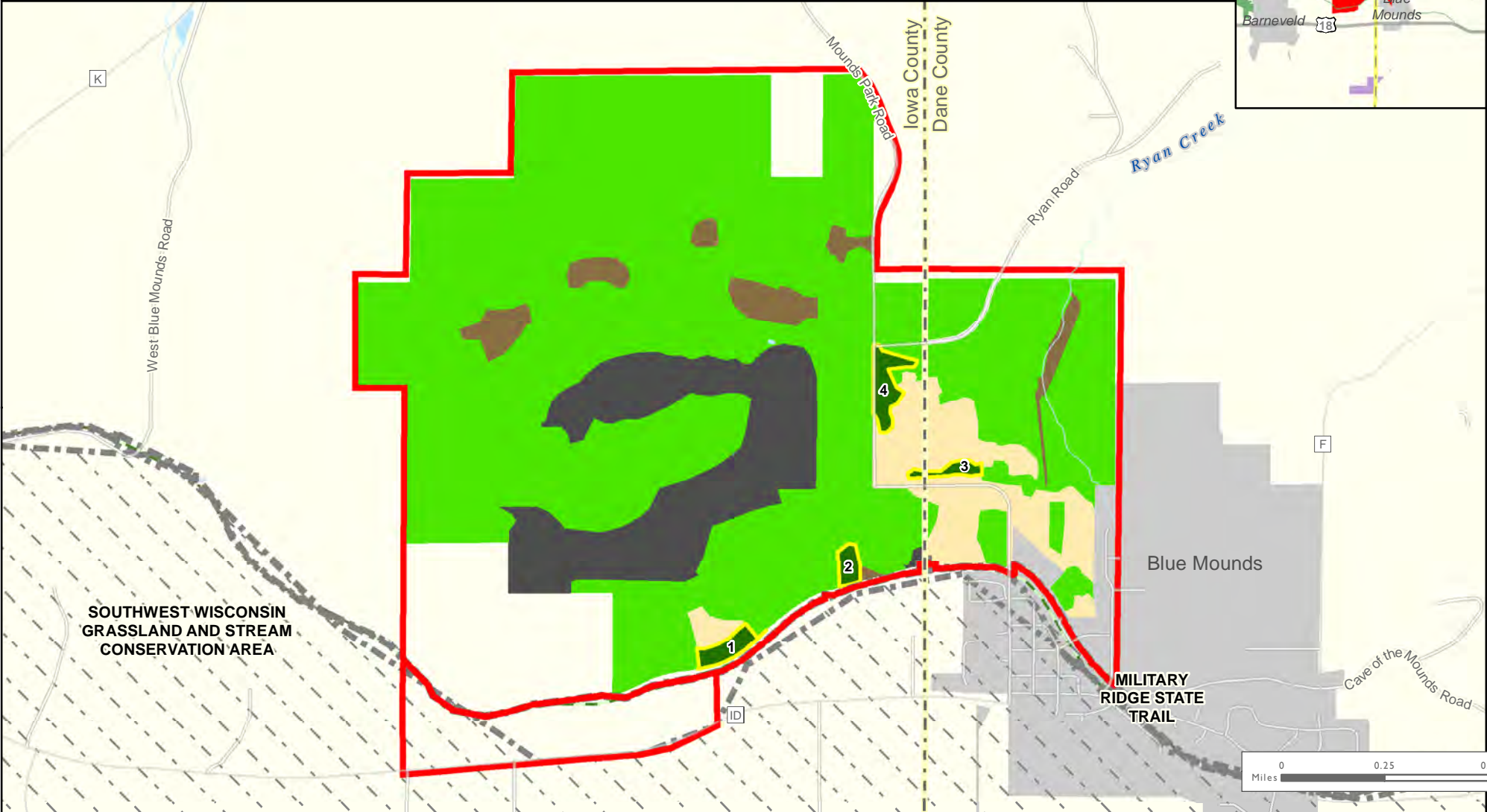
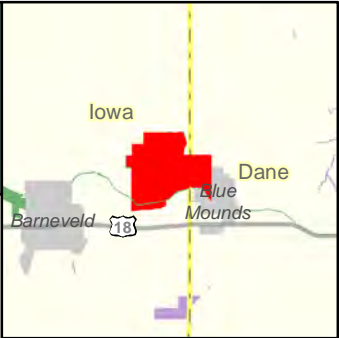
MAP-H

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BLUE MOUND STATE PARK

LAND COVER

DRAFT



MAP-J	Project Boundary	Land Cover Type		Upland Coniferous Forest	Conifer Plantation
	Blue Mound State Park	Developed	Upland Broad-leaved	Upland Shrub	Military Ridge State Trail
	Other Project Boundary	Upland Grass	Deciduous Forest		

WISCONSIN DEPARTMENT OF NATURAL RESOURCES



Bureau of
Facilities and Lands
Sep 10, 2020

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MAP-J

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