

**National Park Service
U.S. Department of the Interior**



**Missouri National Recreational River
South Dakota and Nebraska**

ENVIRONMENTAL ASSESSMENT FOR A PROPERTY MANAGEMENT PLAN

**Finding of No Significant Impact
January 2016**

INTRODUCTION

The National Park Service (NPS) developed a Property Management Plan (PMP) for the following Missouri National Recreational River (MNRR) properties: Green Island (60 acres), Bow Creek Recreation Area (205 acres), and Mulberry Bend (31 acres). The purpose of the plan is to decide how the NPS can best fulfill MNRR's purpose and protect its resources unimpaired for the enjoyment of present and future generations at the three properties. The PMP identifies actions for recreational site development, resource management, and interpretation/education, and establishes management policy on certain issues, such as access, hunting, hiking, and camping.

MNRR's General Management Plan (GMP) was completed in 1997 (39-Mile District) and 1999 (59-Mile District) and these properties were acquired after the GMP was written. A management plan for the three properties is necessary for the park to carry out the NPS mission and the congressional mandates found in the Wild and Scenic Rivers Act—the enabling legislation of the MNRR. The Wild and Scenic Rivers Act established national policy for designated rivers in order to protect and enhance the values that allowed rivers to become components of the National Wild and Scenic River System. It also identifies that “management plans for any such component may establish varying degrees of intensity for its protection and development based on the special attributes of the area.” A management plan is needed to fulfill the intent of the Congressional designation of MNRR.

SELECTED ALTERNATIVE

Four alternatives were evaluated in the October 2015 Environmental Assessment (EA) for the PMP: a no action alternative (alternative A) and three action alternatives (alternative B through D). The action alternatives included low development/management (alternative B), moderate development/management (alternative C), and high development/management (alternative D). The selected alternative for each of the sites is alternative C and is briefly described below. Full descriptions of each selected alternative element considered for the three sites is included in Table 1 of Appendix A. Overall, the selected alternative would increase recreational and restoration activities, site access and facilities, and chances for visitors to learn about resources at each of the sites.

Bow Creek Recreation Area – Natural resource management will include invasive species/noxious weed control, cottonwood regeneration, and grassland management. MNRR will continue to follow Code of Federal Regulations (CFR) 2.1, *Preservation of Natural, Cultural, and Archeological Resources* in order to preserve cultural resources at the site.

Property development will include the construction of a mowed trail system through the northern portion of the property to create two new trail loops. A portion of the mowed trail system will be hardened using gravel or crushed limestone. In addition a spur trail will lead from the main loop to the wetland area. A mowed/primitive trail will also be developed within the Bluff Face area. Three campgrounds will be constructed and will be open from Memorial Day through Labor Day. A gravel loop road with non-electric campsites will be located off of the parking lot (Prairie Campground) and will be open year round as weather permits. Additional signage including a kiosk, campsite location/direction markers, plant identification signs, property signs, and five wayside exhibits will be installed throughout the site. Site access will be improved by developing a landing site for canoes and kayaks. Visitor activities will include hiking, camping, boating, dog walking on a 6-foot leash, and hunting. Prospective implementation of camping permits and designation as a fee use area may be considered pending further NPS procedural review.

An Operation of the National Park System (ONPS) base increase justification request will be submitted, which, if approved, will allow for the addition of one full-time employee for facilities management to assist with the additional park operation responsibilities associated with increased visitation and maintenance at the site. In addition, the hiring of two seasonal employees during the summer months will occur pending availability of funds. Seasonal staff will help address short-term staffing needs associated with construction and maintenance.

Mulberry Bend – Natural resource management at Mulberry Bend will include invasive species control, oak savannah restoration, and maintaining vegetation along trails and other visitor access areas. MNRR will also maintain and increase the vistas along the paved trail by cutting or removing undesirable trees. Cultural resources will be monitored for damage and protected and preserved as necessary per CFR 2.1, *Preservation of Natural, Cultural, and Archeological Resources*.

Property development will include the addition of native plant signs, replacing the backcountry trailhead sign at vista 2, and replacing the current trailhead sign and interpretive sign in the parking area. The current paved trail and backcountry trail will be maintained and gravel/limestone will be added to portions of the backcountry trail as needed. A wooden staircase will be installed at the beginning of the backcountry trail and along the spur trail from vista 2. Boardwalks will be added to the trail in the future as needed. A picnic shelter for the current picnic table, trash/recycling receptacles, and a vault toilet will be installed in the parking lot. A primitive amphitheater used for ranger-led programs will be constructed 0.2 mile from the backcountry trailhead. A bench will be installed at the end of the east spur of the backcountry trail at vista 3. Visitor activities will include hiking, and dog walking on a 6-foot leash,

An increase in park staff will be the same as described above for Bow Creek Recreation Area.

Green Island – Natural resource management at Green Island will include the use of herbicides on invasive/noxious weed species and cutting invasive red cedars. MNRR will continue to follow CFR 2.1, *Preservation of Natural, Cultural, and Archeological Resources* in order to preserve cultural resources at the site. Protective fencing will be installed around the historic pilings to discourage resource damage while encouraging viewing.

Property development will include the construction of a semi-impervious trail on the land side of the site and on the island. Primitive tent camping will be allowed within designated sites on the island. Two charcoal grills will be installed on the beach. One portable toilet will be placed on the island side of the site near the campgrounds and NPS will work with the City of Yankton to have a restroom installed within the Meridian Bridge parking lot. Trash/recycling receptacles will be installed near the restroom on the island, on the beach, and at the trailhead on the land side of the site. New signage will include park informational signs at the beach and bathrooms, campsite markers, vegetation identification signs, and one wayside sign on the island. One site identification sign and three interpretive signs will be installed

on the land side of the site. Site access will be improved by developing a landing site for canoes and kayaks. Visitor activities will include hiking, camping, boating, and dog walking on a 6-foot leash. Prospective implementation of camping permits and designation as a fee use area may be considered pending further NPS procedural review.

An increase in park staff will be the same as described above for Bow Creek Recreation Area.

WHY THE SELECTED ALTERNATIVE WILL NOT HAVE A SIGNIFICANT EFFECT ON THE HUMAN ENVIRONMENT

As defined in 40 CFR §1508.27, significance is determined by examining the following criteria:

Impacts that may have both beneficial and adverse aspects and which on balance may be beneficial, but that may still have significant adverse impacts which require analysis in an Environmental Impact Statement (EIS):

Overall beneficial impacts to water quality, floodplains, and wetlands will occur from an increase in vegetation and control of invasive species at Bow Creek Recreation Area. Some adverse impacts may occur temporarily to water quality during construction activities, such as an increase in turbidity. The placement of a boardwalk will impact 0.02 acre of wetland.

No adverse effects will occur to any resources at Mulberry Bend.

Beneficial impacts to wetlands will occur from invasive species removal resulting in an increase in biodiversity at Green Island. The development of Green Island will have a negligible impact to the floodplain. Temporary adverse impacts to water quality will occur during construction activities due to the increase in turbidity and chemicals from herbicides.

No significant adverse impacts were found at any site that will require analysis in an EIS.

The degree to which the action affects public health and safety:

Trail improvements at all sites and better separation of hunting and camping uses at Bow Creek Recreation Area will result in beneficial health and safety impacts. The development of the Bow Creek Recreation Area and Green Island, including campsites, within the floodplain presents a potential safety concern for visitors during flood events. However, this impact will be effectively mitigated through an Emergency Action Plan that will include warning signage on site and closures of campsites when flood conditions are present. Because the proposed construction lies within the 100-year floodplain at Bow Creek Recreation Area and Green Island, a Statement of Findings for floodplains is required and is located in appendix B.

Unique characteristics of the geographic area such as proximity to historic or cultural resources, parklands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas:

As described in the EA, the following resources will not be affected by the PMP: parklands; prime farmlands; wild and scenic rivers; and ecologically critical areas.

The selected alternative at Bow Creek Recreation Area will have adverse impacts on 0.02 acre of wetlands. Adverse impacts will occur from the construction of a boardwalk over a palustrine, emergent wetland. The placement of the boardwalk support structures within the wetland falls under the excepted action 4.2.1.a. for Boardwalks, according to the *Procedural Manual #77-1: Wetland Protection*. This proposed wetland impact, as an excepted action, does not require a Wetland Statement of Findings or the associated public review process. To minimize shade impacts, the boardwalk will be placed at an

elevation above the vegetation surface at least equal to the width of the boardwalk. In addition, beneficial impacts to wetlands will occur from the removal of invasive species throughout Bow Creek Recreation Area.

To minimize or eliminate any potential degradation of cultural resources at each of the sites, MNRR will continue to follow CFR 2.1, *Preservation of Natural, Cultural, and Archeological Resources*. In addition, the selected alternative for Green Island will have beneficial impacts to cultural resources. Protective fencing will be placed around historic pilings. The fencing will prevent increased erosion and impacts to the historic property.

Degree to which the effects on the quality of the human environment are likely to be highly controversial:

There were no highly controversial effects identified during either the preparation of the EA or the public review period.

Degree to which the possible effects on the quality of human environment are highly uncertain or involve unique or unknown risks:

There were no highly uncertain, unique or unknown risks identified during either preparation of the EA or the public review period.

Degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration:

The selected alternative neither establishes an NPS precedent for future actions with significant effects nor represents a decision in principle about a future consideration.

Whether the action is related to other actions with individually insignificant but cumulatively significant impacts:

When impacts associated with the selected alternative are added to other past, present, or future actions within the areas surrounding Bow Creek Recreation Area, only negligible cumulative impacts are expected to water quality and beneficial cumulative impacts are expected to wetlands and floodplains. At Green Island, only negligible cumulative impacts are expected to floodplains but short term adverse cumulative impacts will occur to water quality from initial construction. Cumulative impacts to wetlands will be beneficial at Green Island. No cumulative impacts will occur at Mulberry Bend.

Degree to which the action may adversely affect districts, sites, highways, or objects listed on the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources:

The selected alternative will have no adverse impacts on archeological resources, historic structures and districts, or cultural landscapes at any of the sites.

Consultation letters describing the proposed projects at the three sites were mailed to the Nebraska State Historic Preservation Office (SHPO), South Dakota SHPO, and three tribes during the public scoping process. A copy of the EA was also provided to the SHPOs and tribes, and these groups were given the opportunity to review and comment on the EA. On October 20, 2015, Nebraska SHPO concurred with NPS' determination of *no effect on historic properties*. On October 22, 2015, South Dakota SHPO stated the agency had no comments, since the properties are not located in South Dakota.

Degree to which the action may adversely affect an endangered or threatened species or its critical habitat:

Consultation letters describing the proposed projects at the three sites were mailed to the U.S Fish and Wildlife Service (USFWS); South Dakota Department of the Environment and Natural Resources; South Dakota Department of Game, Fish, and Parks (DGFP); Nebraska Department of Natural Resources (DNR); and Nebraska Game and Parks Commission on November 24, 2014. Information about the proposed project was included in the consultation letters. A response was received from Nebraska DNR on December 22, 2014, and from South Dakota DGFP on December 23, 2014. Nebraska DNR did not identify any concerns related to special status species. South Dakota DGFP indicated that interior least tern and piping plover colonies do occur within the sites and they identified a bald eagle nest located within Nebraska. South Dakota DGFP requested that MNRR not destroy any natural features that support these species when developing the sites.

A copy of the EA was also provided to these agencies on October 20, 2015, for review and comment. On November 18, 2015, the USFWS concurred with NPS' determination that the proposed project *may affect, but is not likely to adversely affect* federally listed species, specifically the northern long-eared bat (*Myotis septentrionalis*). NPS will avoid clearing woody vegetation between June 1 and July 31 to eliminate impacts to northern long-eared bat pups.

Whether the action threatens a violation of federal, state, or local environmental protection law:

The selected alternative will not violate federal, state, or local environmental protection laws at any of the three sites.

CONCLUSION

The selected alternative does not constitute an action that normally requires preparation of an EIS. The selected alternative will not have a significant adverse effect on the human environment. There are no adverse effects to physical resources, water resources, natural resources, cultural resources, or other unique resources within the region. No highly uncertain or controversial impacts, unique or unknown risks, or known cumulative effects were identified.

After careful and thorough consideration of the facts contained herein, the undersigned finds that the proposed Federal actions are consistent with existing national environmental policies and objectives as set forth in Section 101(a) of the National Environmental Policy Act (NEPA) and that they will not significantly affect the quality of the human environment or otherwise include any condition requiring consultation pursuant to Section 102 (2)(c) of NEPA.

Based on the foregoing, it has been determined that an EIS is not required for this project and thus will not be prepared.

Recommended:

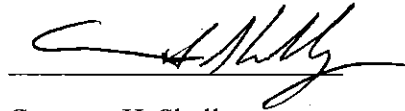


Date:

1/25/16

Richard A. Clark
Superintendent
Missouri National Recreational River

Approved:



Date:

2/24/16

Cameron H. Sholly
Regional Director
Midwest Region

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APPENDIX A

Detailed Description of the Selected Alternative

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Table 1. Elements of the Selected Alternative at Bow Creek Recreation Area, Mulberry Bend, and Green Island

Alternative Element	Bow Creek Recreation Area	Mulberry Bend	Green Island
Resource Management			
Cottonwood Regeneration and Native Species Restoration	<ul style="list-style-type: none"> The northwest corner of the site would be mowed, treated with herbicide, and planted with locally collected native species and cottonwood cuttings or seedlings. Shallow disking would occur to disturb soils to encourage cottonwood growth. 	<ul style="list-style-type: none"> Not applicable (N/A) 	<ul style="list-style-type: none"> N/A
Vegetation Maintenance	<ul style="list-style-type: none"> N/A 	<ul style="list-style-type: none"> During the growing season, weekly mowing along the edges of the sidewalks, driveway, picnic table area, parking lot "island," and any new features proposed. The width of mowing is approximately 2 feet on either side of driveways and sidewalks. Remove hazard trees. Maintain vegetation along trails by trimming brush. 	<ul style="list-style-type: none"> N/A
Backwater Restoration	<ul style="list-style-type: none"> No backwater restoration 	<ul style="list-style-type: none"> N/A 	<ul style="list-style-type: none"> There is no backwater at the site. Previously restored (2008) backwater naturally converted to the present-day side channel during the 2011 flood event.
Invasive Species Control	<ul style="list-style-type: none"> Invasive species/noxious weed control includes the use of herbicides and some mowing/cutting as needed according to the Exotic Plant Management Plan. 	<ul style="list-style-type: none"> Invasive species/noxious weed control includes the use of herbicides on perennials including leafy spurge, buckthorn, and Canada thistle. Mechanical cutting of biennials including musk thistle, plumeless thistle, mullein, and sweet clover. Mechanical cutting/herbicide use to control hemp. 	<ul style="list-style-type: none"> Invasive species/noxious weed control includes the use of herbicides on perennials and mowing/cutting biennials. Eastern red cedars are controlled by cutting.
Grassland Management	<ul style="list-style-type: none"> Prescribed fires occur according to the Fire Management Plan. 	<ul style="list-style-type: none"> N/A 	<ul style="list-style-type: none"> N/A
Oak Savannah and Prairie Restoration	<ul style="list-style-type: none"> N/A 	<ul style="list-style-type: none"> Perform a broadcast burn throughout the entire site to control 	<ul style="list-style-type: none"> N/A

Alternative Element	Bow Creek Recreation Area	Mulberry Bend	Green Island
		<ul style="list-style-type: none"> eastern red cedar, green ash, and hackberry every 2 to 5 years. A total of 12 fire personnel, 2 all-terrain vehicles, and a fire truck are needed to implement burns. Cut and chip eastern red cedars. If trees cannot be chipped, they would be burned. No cutting would occur within the archeology site on the west side of the highway. 	
Maintain Vista	<ul style="list-style-type: none"> N/A 	<ul style="list-style-type: none"> Trees are selectively cut to maximize the views from vistas along the paved and backcountry trail. A minimal number of trees are removed and trees are typically nonnative and/or undesirable species including green ash, hackberry, white mulberry, and Siberian elm. Additional trees at the two vistas located along the paved trail would be cleared to increase the viewshed every other year. Oak trees would remain in place due to the oak savannah restoration. At vista 1, three mulberry, five eastern red cedar, six Siberian elm, eight green ash, and three hackberry would be proposed for cutting. At vista 2, three elm, three hackberry, and three mulberry would be cleared. At the observation point above vista 2, five elm would be cleared to enhance the downstream view. Trees would be cut at the two vistas located on the backcountry trail to increase the viewshed every other year. Current trees would be monitored at vista 3 for view encroachment and eight hackberry trees would be cleared at vista 4. 	<ul style="list-style-type: none"> N/A
Cultural Resource	<ul style="list-style-type: none"> Continue to follow CFR 2.1, 	<ul style="list-style-type: none"> Cultural resources, including 	<ul style="list-style-type: none"> Historic pilings and scattered

Alternative Element	Bow Creek Recreation Area	Mulberry Bend	Green Island
Management	<p><i>Preservation of Natural, Cultural and Archeological Resources.</i></p> <ul style="list-style-type: none"> Identify and protect cultural resources as needed. 	<p>archeological sites are monitored for damage and protected as necessary.</p> <ul style="list-style-type: none"> Continue to follow CFR 2.1, <i>Preservation of Natural, Cultural and Archeological Resources.</i> 	<p>buffalo bones are located on the site.</p> <ul style="list-style-type: none"> Continue to follow CFR 2.1, <i>Preservation of Natural, Cultural and Archeological Resources.</i> Protective fencing would be placed around the historic pilings. Fence would be either a post and cable fence or split rail fence.
Property Development			
Signage	<ul style="list-style-type: none"> One kiosk to include informational panels about the unique natural and cultural resources of the property as well as basic orienting information would be installed in the parking lot. Campsite locational/directional markers would be installed. Small plant identification signs would be installed. The current property identification sign on the river would be removed and a new sign installed at the Riverside Campground area. One property identification sign would be installed on the river at the Bluff Face Campground. Three waysides to be installed along the trail. 	<ul style="list-style-type: none"> A wooden entrance sign is located at the intersection of the highway and property access road. This sign is repainted as needed when fading occurs. Interpretive signs are located in the parking lot and at each of the vistas (vistas 1 and 2) along the paved trail. Directional signs are located along the primitive trail. Small signs would be installed within the parking lot "island" identifying native plant species. Small signs would be installed along the trails identifying native plant species. Current signs would be maintained. Replace current information sign near the parking lot. Replace the primitive trail head sign located at paved trail overlook (vista 2) depicting the unique natural resources and historical context of the property and primitive trail. Two waysides discussing natural river processes/river change would be installed at vista 3 on the primitive trail One wayside discussing forest character would be installed near the amphitheater. 	<ul style="list-style-type: none"> One interpretive panel would be installed on the island's north beach area and the current informational sign on the land side would be replaced. Campsite markers, vegetation identification signs, and one wayside interpretive sign would be installed on the island Three interpretive signs would be installed on the land side of the site.

Alternative Element	Bow Creek Recreation Area	Mulberry Bend	Green Island
Trails	<ul style="list-style-type: none"> Mowed trail system would be placed through the northern portion of the property to create two loops. This trail would be in compliance with Americans with Disabilities Act (ADA) standards as much as feasible. Boardwalks would be constructed in sensitive areas (e.g., wetlands). A portion of the mowed trail system from the parking lot to Riverside Campground would be hardened using gravel or crushed limestone. Backwater spur trail would be constructed from the main trail leading to the wetland area. This spur trail would be primitive. A mowed/primitive trail leading to the Bluff Face campground would be constructed. 	<ul style="list-style-type: none"> A paved trail begins in the parking lot and leads to two main vistas (vista 1 and 2). A backcountry dirt trail extends from the second vista through the forest and includes two additional vistas. The existing paved trail would be maintained and the first section (0.05 mile) of dirt back country trail from vista 2 may be reconfigured. The backcountry trail would be maintained in its primitive state; however, semi-permeable surface material such as gravel or crushed limestone would be added if needed. A wooden staircase would be installed at the beginning of the backcountry trail to reduce steepness. This is an approximate 10-foot section. Gravel steps or a wooden staircase would be installed along the spur trail, which extends from vista 2. An observation point would be constructed at the top of the stairs with the same material as the steps (e.g., gravel). A boardwalk on the backcountry trail would be added when necessary to prevent erosion or to protect resources. 	<ul style="list-style-type: none"> A trail would be located on the land side of the site and on the island. The trail would have a semi-impervious surface (gravel or crushed limestone). A boardwalk would be constructed in sensitive areas as needed. If possible, the trails would meet ADA standards. Spur trails would lead from the main loop trail to campsites and restroom as appropriate on the island. Two benches would be installed along trail on the land side of the site.
Campground	<ul style="list-style-type: none"> Primitive camping in designated (12-foot by 12-foot) sites would be permitted. A gravel loop road with non-electric campsites would be located off of the parking lot. Each campsite within the Prairie Campground would include a picnic table. This campground 	<ul style="list-style-type: none"> No camping is permitted. 	<ul style="list-style-type: none"> Primitive tent camping would be permitted within 5 to 15 designated sites on the island. All campsites may require a permit and potential recreational fee in accordance with NPS guidelines and future approval as a fee use area.

Alternative Element	Bow Creek Recreation Area	Mulberry Bend	Green Island
	<p>would be open year round as weather permits.</p> <ul style="list-style-type: none"> Hike-in campsites would be established along the river on the north side of the site. The Riverside Campground would be open Memorial Day through Labor Day. A designated primitive campsite would be established in the Bluff Face area which would be accessible by boat. The Bluff Face Campground would be open Memorial Day through Labor Day. All campsites may require a permit and potential associated recreational fee in accordance with NPS guidelines and future approval as a fee use area. 		
Campfires	<ul style="list-style-type: none"> Metal fire rings may be installed at designated campsites. County burn bans would be enforced as needed. 	<ul style="list-style-type: none"> No campfires are permitted. 	<ul style="list-style-type: none"> Metal fire rings may be installed in future, based on permit conditions. No open campfires would be permitted on the beach or at campsites. Two charcoal grills would be installed on the beach. County burn bans would be enforced as needed. N/A
Picnic Area/Shelter	<ul style="list-style-type: none"> Picnic tables would be provided at each campsite in the Prairie Campground (near parking lot) area only. 	<ul style="list-style-type: none"> Install a picnic shelter over the picnic table located by the parking area on the east side of the site. The picnic shelter would be approximately 10 feet by 20 feet and additional picnic tables may be added. Install a bench at the end of the east spur of the backcountry trail at vista 3. 	
Restroom Facility	<ul style="list-style-type: none"> Vault toilets (male/female) would be installed in the parking lot. 	<ul style="list-style-type: none"> Concrete vault toilet would be installed within the "island" at the east side of parking area. 	<ul style="list-style-type: none"> One portable restroom would be placed on the island seasonally. Portable restrooms would potentially be contracted.

Alternative Element	Bow Creek Recreation Area	Mulberry Bend	Green Island
	<ul style="list-style-type: none"> A portable toilet would be located at the Riverside Campground. 		<ul style="list-style-type: none"> MNRR would consider work with partners to have a restroom by the Meridian Bridge parking area or other nearby area.
Trash Receptacles	<ul style="list-style-type: none"> A recycling receptacle would be installed adjacent to the trash receptacle in the parking lot. A trash and recycling receptacle would be installed at each campground restroom. There would be no trash/recycle receptacles within the Bluff Face Campground. 	<ul style="list-style-type: none"> A trash and recycling receptacle would be installed next to the picnic table in the east side of the site. 	<ul style="list-style-type: none"> A trash /recycle receptacle would be installed next to the restroom on the island A trash/recycle receptacle would be installed on the beach near charcoal grills. A trash/recycle receptacle would be installed at the trailhead on the land side of the site.
Potable water/Drinking Fountains	<ul style="list-style-type: none"> No potable water or drinking fountain is available. 	<ul style="list-style-type: none"> No potable water or drinking fountain is available. 	<ul style="list-style-type: none"> No potable water or drinking fountain is available.
Amphitheater	<ul style="list-style-type: none"> N/A 	<ul style="list-style-type: none"> A primitive amphitheater would be installed using wood/native materials approximately 0.2 mile from the backcountry trailhead. The amphitheater would be used for ranger-led programs. 	<ul style="list-style-type: none"> N/A
Visitor Activities			
Dog Walking	<ul style="list-style-type: none"> 36 CFR 2.15 – Dog walking on a 6-foot leash or less is permitted. Dog walking off-leash would be permitted in support of hunting activities. 	<ul style="list-style-type: none"> 36 CFR 2.15 – Dog walking on a 6-foot leash or less is permitted. 	<ul style="list-style-type: none"> 36 CFR 2.15 – Dog walking on a 6-foot leash or less is permitted.
Hunting	<ul style="list-style-type: none"> Hunting, including upland game, turkey, waterfowl, and deer, is permitted Labor Day through Memorial Day in accordance with applicable State regulations and seasons. Portable hunting stands/duck blinds are allowed on the site for a maximum of 24 hours and they must include the owner contact information visible from the ground. 	<ul style="list-style-type: none"> No hunting is permitted. 	<ul style="list-style-type: none"> No hunting is permitted.
Horseback Riding	<ul style="list-style-type: none"> No Horseback riding is permitted. 	<ul style="list-style-type: none"> No Horseback riding is permitted. 	<ul style="list-style-type: none"> No Horseback riding is permitted.

Alternative Element	Bow Creek Recreation Area	Mulberry Bend	Green Island
Bike Riding	<ul style="list-style-type: none"> Bike riding is permitted on park roads and within the parking lot. No bike riding on trails. 	<ul style="list-style-type: none"> Bike riding is permitted on park roads and within the parking lot. Bike riding is not permitted on the paved or backcountry trails. 	<ul style="list-style-type: none"> As bicycle riding is only permitted on park roads and parking lots, no bike riding is allowed due to lack of such roadways.
Off-Road Vehicles	<ul style="list-style-type: none"> No off-road vehicles are permitted on the site. Off-road vehicles are used for administrative park access only. A landing site for canoe/kayaks would be improved and/or developed. 	<ul style="list-style-type: none"> No off-road vehicles are permitted on the site. Off-road vehicles are used for administrative park access only. N/A 	<ul style="list-style-type: none"> No off-road vehicles are permitted on the site. Off-road vehicles are used for administrative park access only. A gently sloped beach/island bank would provide canoe and kayak access to the island's south shore.
Site Access			
Site Access/Parking Lot	<ul style="list-style-type: none"> A parking lot is located on lower Bow Creek. Upper Bow Creek is accessible by water only. 	<ul style="list-style-type: none"> West Side – There are no access roads or parking lots located on the west side of the site. East Side – The site can be accessed via Nebraska Highway 15. A vehicle parking lot is located on the east side of the site. The parking lot is chipped/sealed as necessary. 	<ul style="list-style-type: none"> No parking lots are available at the site. Access is permitted by boat and from the City of Yankton Meridian Bridge parking area (old Highway 81). There is no bridge connecting the land side of the site to the island.
Park Operations			
Staffing	<ul style="list-style-type: none"> An Operation of the National Park System (ONPS) base increase justification request would be submitted in the future. If granted, one full-time employee would be added for facilities management. An additional two seasonal employees would be hired during the summer months, pending funding availability. 	<ul style="list-style-type: none"> An ONPS base increase justification request would be submitted in the future. If granted, one full-time employee would be added for facilities management. An additional two seasonal employees would be hired during the summer months, pending funding availability. 	<ul style="list-style-type: none"> An ONPS base increase justification request would be submitted in the future. If granted, one full-time employee would be added for facilities management. An additional two seasonal employees would be hired during the summer months, pending funding availability.
Fees	<ul style="list-style-type: none"> Camping fees may be considered in accordance with NPS guidelines and approval as a fee use area. 	<ul style="list-style-type: none"> N/A 	<ul style="list-style-type: none"> Camping fees may be considered in accordance with NPS guidelines and approval as a fee use area. No Winter maintenance is conducted
Winter Maintenance	<ul style="list-style-type: none"> No Winter maintenance is conducted 	<ul style="list-style-type: none"> The overlook gate is closed when winter conditions (e.g., snow and ice) create unsafe conditions for visitors. 	<ul style="list-style-type: none"> No Winter maintenance is conducted

ENVIRONMENTAL ASSESSMENT FOR THE PROPERTY MANAGEMENT PLAN

NON-IMPAIRMENT DETERMINATION

Why is a Non-Impairment Determination Required:

Section 1.4.7 of *Management Policies 2006* states that:

[b]efore approving a proposed action that could lead to an impairment of park resources and values, an NPS decision-maker must consider the impacts of the proposed action and determine, in writing, that the activity will not lead to an impairment of park resources and values.

Actions that require preparation of Environmental Assessments (EAs) and Environmental Impact Statements (EISs) constitute actions that may have the potential to impair park resources or values. Therefore, a non-impairment determination must be made for any action selected in a Finding of No Significant Impact (FONSI) or Record of Decision (ROD) that could impact park resources and values and to which the NPS is a signatory. The non-impairment determination is completed only for the selected action.

What is Impairment?

Sections 1.4.5 and 1.4.6 of *Management Policies 2006* provide an explanation of impairment.

Section 1.4.5 defines impairment as:

an impact that, in the professional judgment of the responsible NPS manager, would harm the integrity of park resources or values, including the opportunities that otherwise would be present for the enjoyment of those resources or values.

Section 1.4.5 goes on to state that:

[a]n impact to any park resource or value may, but does not necessarily, constitute impairment. An impact would be more likely to constitute impairment to the extent that it affects a resource or value whose conservation is:

- Necessary to fulfill specific purposes identified in the establishing legislation or proclamation of the park
- Key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park, or
- Identified as a goal in the park's general management plan or other relevant NPS planning documents as being of significance.

An impact would be less likely to constitute an impairment if it is an unavoidable result of an action necessary to preserve or restore the integrity of park resources or values and it cannot be further mitigated.

Section 1.4.6 of *Management Policies 2006* identifies the park resources and values that are subject to the non-impairment standard.

The “park resources and values” that are subject to the non-impairment standard include:

- the park’s scenery, natural and historic objects, and wildlife, and the processes and condition that sustain them, including, to the extent present in the park: the ecological, biological, and physical processes that created the park and continue to act upon it; scenic features; natural visibility, both in daytime and at night; natural landscapes; natural soundscapes and smells; water and air resources; soils; geological resources; paleontological resources; archeological resources; cultural landscapes; ethnographic resources; historic and prehistoric sites, structure, and objects; museum collections; and native plants and animals;
- appropriate opportunities to experience enjoyment of the above resources, to the extent that can be done without impairing them;
- the park’s role in contributing to the national dignity, the high public value and integrity, and the superlative environmental quality of the national park system, and the benefit and inspiration provided to the American people by the national park system; and
- any additional attributes encompassed by the specific values and purposes for which the park was established.

How is a Non-Impairment Determination Made?

Section 1.4.7 of *Management Policies 2006* states that

“[I]n making a determination of whether there would be an impairment, an NPS decision maker must use his or her professional judgment. This means that the decision-maker must consider any environmental assessments or environmental impact statements required by the National Environmental Policy Act of 1969 (NEPA); consultations required under Section 106 of the National Historic Preservation Act (NHPA); relevant scientific and scholarly studies; advice or insights offered by subject matter experts and others who have relevant knowledge or experience; and the results of civic engagement and public involvement activities relating to the decision.”

Management Policies 2006 further define “professional judgment” as

“a decision or opinion that is shaped by study and analysis and full consideration of all the relevant facts, and that takes into account the decision-maker’s education, training, and experience; advice or insights offered by subject matter experts and others who have relevant knowledge and experience; good science and scholarship; and, whenever appropriate, the results of civic engagement and public involvement activities relation to the decision.”

How is a Written Non-Impairment Determination Prepared?

This determination on impairment has been prepared for the preferred alternative at Bow Creek Recreation Area, Mulberry Bend, and Green Island described on pages 25, 37, and 47 of the EA, respectively. An impairment determination is made for all resource impact topics analyzed for the preferred alternative. An impairment determination is not made for soundscapes, socioeconomics, transportation, health and safety, visitor use and experience, and park operations because impairment findings relate back to park resources and values, and these impact areas are not generally considered to be park resources or values according to the Organic Act, and cannot be impaired in the same way that an action can impair park resources and values.

Hydrology/Water Quality

One of the purposes of the Missouri National Recreational River (MNRR) is to preserve the river in a free-flowing condition and protect it for the enjoyment of present and future generations. MNRR is significant because the riverine and riparian habitats within the river corridor provide important wildlife habitat and the 59-mile segment is one of the last representative parts of the undammed, unchanneled middle Missouri River. It features a section of the river meandering in an older, wider river valley not found on the other undammed, unchanneled Missouri River sections. The large river environment found on the 59-mile Missouri River segment is rare in the Great Plains. Water quality is integral to the protection of this resource. Surface water features at Bow Creek Recreation Area include the mainstem Missouri River, Bow Creek located on the southern portion of the site, and St. Helena Chute located on the northwestern portion of the site. Water quality data collected in 2015 on Bow Creek which flows through Bow Creek Recreation Area indicated that the quality of water within the Bow Creek Recreation Area is within the U.S. Environmental Protection Agency (USEPA) accepted limits for dissolved oxygen and pH. Surface water features at Green Island include the mainstem Missouri River, the Missouri River side channel, and Beaver Creek, located on the western portion of the site. Water quality data were collected at this site in 2014. Dissolved oxygen levels were within USEPA accepted limits; however, recorded pH values from May through August exceeded USEPA acceptable limits. No surface water features are located at Mulberry Bend.

At Bow Creek Recreation Area and Green Island, indirect impacts to water quality have the potential to occur during the development of the site, vegetation management, and due to the increased use of the site. Indirect impacts include temporary increases in turbidity from erosion and sedimentation and changes in water quality due to the increase of chemicals associated with herbicides and trash. These short and long-term localized impacts will not affect the preservation and protection of the Missouri River. However, at Bow Creek Recreation Area, the addition of vegetation within the floodplain will increase the quality of water creating long-term beneficial impacts. Therefore, impacts to water quality as a result of development of the sites will not result in overall impairment of water quality.

Floodplains

Bow Creek Recreation Area and Green Island are both almost completely encompassed by the 100-year floodplain. At Bow Creek Recreation Area, long-term beneficial impacts to the functions and value of the 100-year floodplain will occur due to the mowing, planting, and disking of the northwest corner of the site. An increase in vegetation will slow runoff and decrease flood velocities. At both Bow Creek Recreation Area and Green Island, development within the floodplain will create impacts to the floodplain function and values; however, these impacts will be negligible, small, and localized. Hiking, camping, hunting (Bow Creek Recreation Area only), fishing, and boating will be allowed at the sites. These activities will occur within the 100-year floodplain and will present a risk to safety of visitors during flood events. An Emergency Action Plan will be developed by MNRR that will include evacuation plans in the event of an emergency. Therefore, impacts to the floodplain as a result of development of Bow Creek Recreation Area and Green Island will not result in overall impairment of floodplains.

Wetlands

A combined total of five palustrine wetlands encompassing 11.74 acres of land were identified and delineated within Bow Creek Recreation Area and Green Island. In addition, a total of three riverine wetland systems totaling 249.81 acres were also identified and mapped at the two sites. No wetlands are located at Mulberry Bend. The proposed construction at Bow Creek Recreation Area would adversely impact 0.02 acre of Wetland 2 due to the placement of boardwalk support structures within the wetland along a mowed trail (Figure 22 of the PMP/EA). Placing the support structures within Wetland 2 will be

considered an excepted action, and does not require a Wetland Statement of Findings. Beneficial impacts to wetlands will also occur at the site from the increase in species diversity due to invasive species management and enhancement of the buffer along St. Helena Chute. Similar beneficial impacts to wetlands at Green Island will occur from the removal of invasive species and increase in species diversity

Although 0.02 acre of direct impacts will occur to wetlands from the construction of a boardwalk along a mowed trail at Bow Creek Recreation Area, the invasive species control and buffer enhancement will improve the overall functionality and values of the wetlands throughout the park. Additionally, placement of the boardwalk will avert social trails that otherwise may deviate overtime from hikers seeking to avoid wet, trampled areas. Therefore, impacts to wetlands as a result of the development of the sites will not result in overall impairment of wetlands.

Archeological Resources

One of the purposes of MNRR is to preserve the significant historic and cultural resources of the Missouri River corridor. MNRR is significant because of the number and variety of prehistoric and historic resources along the river that attest to the long history of human use. Prehistoric villages, the route of Lewis and Clark, steamboat wrecks, the territorial capital of Yankton, and ethnic settlements have the potential for enriching visitors' understandings of past and present cultures. A cultural resources survey was completed at each site in 2015. No archeological resources were discovered at Bow Creek Recreation Area, but three car dumps were discovered that have the potential of being historic. At Mulberry Bend, an archeological site was further discovered on the west side of the site. The study verified previously recorded historic pilings at Green Island. MNRR will continue to follow CFR 2.1, *Preservation of Natural, Cultural and Archeological Resources* to preserve cultural resources at the sites. The proposed developments at Bow Creek Recreation Area and Mulberry Bend will have no adverse effect on cultural resources since development in areas containing cultural resources will be avoided. At Green Island, beneficial impacts to cultural resources would occur due to the placement of protective fencing around the historic pilings. Overall, no adverse effect will occur at each of the sites and MNRR will continue to preserve the significant historic and cultural resources of the Missouri River corridor. For these reasons, there will be no impairment of archeological resources as a result of the development of the sites.