

Final Comprehensive Conservation Plan and Environmental Impact Statement

*Charles M. Russell National Wildlife Refuge
UL Bend National Wildlife Refuge*

Volume 1

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U.S. Fish and Wildlife Service**

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Abstract

Final Comprehensive Conservation Plan and Environmental Impact Statement

Charles M. Russell National Wildlife Refuge and UL Bend National Wildlife Refuge, Montana

Type of Action: Administrative

Lead Agency: U.S. Fish and Wildlife Service

Responsible Official: Steve Guertin, Regional Director, region 6, U.S. Fish and Wildlife Service

Abstract: This final comprehensive conservation plan and environmental impact statement (final CCP and EIS) identifies the purpose and need for a management plan, outlines the legal foundation for management of two refuges in Montana, Charles M. Russell National Wildlife Refuge and UL Bend National Wildlife Refuge, and describes and evaluates four alternative plans including the no-action alternative, for managing wildlife, habitat, and wildlife-dependent public use. This process has involved the development of a vision, goals, objectives, and strategies that meet the legal directives of the U.S. Fish and Wildlife Service (Service) and has considered the input of interested groups and the public.

Under the no-action alternative (A), few changes would occur in managing existing wildlife populations and habitat. The habitat regime would be maintained mostly through a fire suppression program with little use of prescribed fire. There would be continued emphasis on big game management, annual livestock grazing, fencing, invasive species control, and water development. Habitats would continue to be managed in 65 units, and residual cover would be measured. Wildlife-dependent public use would occur at current levels, which includes hunting, fishing, wildlife observation, photography, and limited interpretation and environmental education programs. About 670 miles of road would remain open. The Service would continue to manage the 20,819-acre UL Bend Wilderness and 155,288 acres of proposed wilderness within the Charles M. Russell National Wildlife Refuge.

Under alternative B's wildlife population emphasis, the Service would manage the landscape in cooperation with partners to emphasize abundant wildlife populations using both (1) natural ecological processes

such as fire and wildlife ungulate herbivory (grazing) and (2) responsible farming practices or tree planting. Wildlife-dependent public use would be encouraged, but economic uses would be limited when they compete for habitat resources. About 106 miles of road would be closed. The Service would expand the acreage of existing proposed wilderness by 25,869 acres.

Under alternative C's public use and economic use emphasis, the Service would manage the landscape in cooperation with partners to emphasize and promote maximum levels of compatible, wildlife-dependent public use and economic use. Wildlife populations and habitats would be protected with various management tools that would minimize damaging effects to wildlife and habitats while enhancing and diversifying public and economic opportunities. None of the existing, proposed wilderness units would be expanded.

Under the Service's preferred alternative (alternative D's ecological processes emphasis), the Service would work with partners to use natural, dynamic, ecological processes along with active management in a balanced, responsible manner to restore and maintain biological diversity, biological integrity, and environmental health. Once natural processes were restored, more passive approaches would be favored. The Service would provide for quality wildlife-dependent public use and experiences and would limit economic uses when they were injurious to ecological processes. About 21 miles of road would be permanently closed, and 15 miles of road would be seasonally closed. The Service would expand the acreage of existing, proposed wilderness units by 19,942 acres.

Public Review and Distribution. The draft CCP and EIS was available for public review from September 7, 2010, to December 10, 2010. The Service received 53 letters from Federal, State, and local government agencies and nearly 20,600 letters, emails, and verbal comments from individuals. The final CCP and EIS can be viewed at <www.fws.gov/cmr/planning> and is presented in two volumes: volume 1 is the final CCP and EIS and volume 2 contains comments on the draft CCP and EIS along with the Service's responses to substantive comments. The Service will issue a record of decision no sooner than 30 days after publication of the notice of availability of the final CCP and EIS in the Federal Register. For further information, contact Laurie Shannon at 303 / 236 4317.

Cooperating Agencies: U.S. Army Corps of Engineers; Bureau of Land Management; Montana Department of Fish, Wildlife and Parks; Montana Department of Natural Resources and Conservation; Fergus, Garfield, McCone, Petroleum, Phillips, and Valley Counties; and Missouri River Conservation Districts Council (for the six districts that surround the refuge).

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Summary



Brett Billings / USFWS

Low clouds hang over the Missouri River on the Charles M. Russell National Wildlife Refuge.

The U.S. Fish and Wildlife Service has developed this final comprehensive conservation plan and environmental impact statement (final CCP and EIS) to provide alternatives and identify consequences for the management and use of the Charles M. Russell National Wildlife Refuge and the UL Bend National Wildlife Refuge in Montana. The alternatives are the result of extensive public input and of working closely with several cooperating agencies: U.S. Army Corps of Engineers; Bureau of Land Management; Montana Department of Fish, Wildlife and Parks; Montana Department of Natural Resources and Conservation; counties of Fergus, Garfield, McCone, Petroleum, Phillips, and Valley; and Missouri River Conservation Districts Council (for the six districts that surround the refuge). Other tribal governments, governmental agencies, nongovernmental organizations, businesses, and private citizens contributed substantial input to the plan.

This document (volume 1) contains the final CCP and EIS. The accompanying volume 2 contains the Service's summarization and response to public comments and testimony received during public review of the draft CCP and EIS.

Encompassing nearly 1.1 million acres—including Fort Peck Reservoir and UL Bend National Wildlife Refuge—Charles M. Russell National Wildlife Refuge is one of the largest refuges in the lower 48 States. This refuge in north-central Montana extends west about 125 air miles along the Missouri River from Fort Peck Dam to the refuge's western edge at the boundary of the Upper Missouri River Breaks National Monument. A portion of the Missouri River along the refuge's western boundary is part of

Upper Missouri National Wild and Scenic River. This expansive refuge covers parts of six counties: Fergus, Petroleum, Garfield, McCone, Valley, and Phillips.

Refuge habitat includes native prairie, forested coulees, river bottoms, and badlands. Wildlife is as diverse as the topography and includes Rocky Mountain elk, mule deer, white-tailed deer, pronghorn, Rocky Mountain bighorn sheep, sharp-tailed grouse, prairie dogs, and more than 236 species of birds.

More than 250,000 visitors take part in a variety of wildlife-dependent recreational activities every year. In particular, the refuge is renowned for its outstanding hunting opportunities. Other visitors enjoy viewing and photographing wildlife along the refuge's extensive network of roads. The Fort Peck Interpretive Center showcases an aquarium of native and game fish, other wildlife, and several casts of dinosaur fossils including a *Tyrannosaurus rex*. Still others enjoy fishing along the Missouri River or on Fort Peck Reservoir.

REFUGE BACKGROUND

In 1805, Meriwether Lewis and William Clark first detailed accounts of the abundant wildlife resources they found in the area now known as Charles M. Russell National Wildlife Refuge (Moulton 2002). One hundred thirty years later, Olaus J. Murie, a renowned wildlife biologist for the U.S. Biological Survey, made the first biological assessment of plant and wildlife species for the proposed Fort Peck Migratory Bird Refuge (Murie 1935).



Dan Studia / USFWS

The veery is a “focal” species, one of the first to respond to changed conditions, for refuge river bottoms.

The refuge was established in 1936 as the Fort Peck Game Range for sustaining large numbers of sharp-tailed grouse, pronghorn, and other wildlife. In 1963, it was designated as the Charles M. Russell National Wildlife Range in honor of famous western painter Charlie Russell, and this “range” became a “refuge” in 1976. UL Bend National Wildlife Refuge was established in 1969 and lies within the boundary of Charles M. Russell National Wildlife Refuge; these two Refuge System units are managed cohesively as one refuge. As part of the National Wildlife Refuge System, the refuge is managed for wildlife conservation above all else. UL Bend National Wildlife Refuge contains the 20,819-acre UL Bend Wilderness, and Charles M. Russell National Wildlife Refuge has 15 proposed wilderness units totaling 155,288 acres.

PURPOSE and NEED for the PLAN

The purpose of this final CCP and EIS is to identify actions necessary to accomplish the purposes of the refuges, identify the role the refuges will play in support of the mission of the National Wildlife Refuge System and to provide long-term guidance for management of refuge programs and activities. The CCP is needed:

- to communicate with the public and other partners in efforts to carry out the mission of the National Wildlife Refuge System;
- to provide a clear statement of direction for management of the refuge;
- to provide neighbors, visitors, and government officials with an understanding of the Service’s management actions on and around the refuge;
- to ensure the Service’s management actions are consistent with the National Wildlife Refuge Improvement Act of 1997 (Improvement Act);

- to ensure that management of the refuge considers other Federal, State, and county plans;
- to provide a basis for development of budget requests for the operation, maintenance, and capital improvement needs of the refuge.

The Service is committed to sustaining the Nation’s fish and wildlife resources together through the combined efforts of governments, businesses, and private citizens.

NATIONAL WILDLIFE REFUGE SYSTEM

Like all national wildlife refuges, Charles M. Russell and UL Bend Refuges are administered under the National Wildlife Refuge System Administration Act of 1966, as amended in 1997.

The mission of the National Wildlife Refuge System is to administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans.

REFUGE PURPOSES

Each national wildlife refuge is managed to fulfill the mission of the National Wildlife Refuge System, as well as the specific purposes for which that refuge was established.

The purpose for a national wildlife refuge comes from one or more authorities—law, proclamation, Executive order, agreement, or other document—that establish or expand a refuge. In 1936, Charles M. Russell National Wildlife Refuge was established by Executive Order 7509 for the following purpose:

“That the natural forage resources therein shall be first utilized for the purpose of sustaining in a healthy condition a maximum of four hundred thousand (400,000) sharp-tailed grouse, and one thousand five hundred (1,500) antelope, the primary species, and such nonpredatory secondary species in such numbers as may be necessary to maintain a balanced wildlife population, but in no case shall the consumption of the forage by the combined population of

the wildlife species be allowed to increase the burden of the range dedicated to the primary species: Provided further, That all the forage resources within this range or preserve shall be available, except as herein otherwise provided with respect to wildlife, for domestic livestock ... And provided further, That land within the exterior limits of the area herein described ... may be utilized for public grazing purposes only to the extent as may be determined by the said Secretary (Agriculture) to be compatible with the utilization of said lands for the purposes for which they were acquired.”

UL Bend National Wildlife Refuge was established in 1969 “for use as an inviolate sanctuary, or for any other management purpose, for migratory birds” (16 U.S.C. 715d, Migratory Bird Conservation Act).

Other lands within both refuges subsequently have been acquired under a variety of transfer and acquisition authorities or have different designations, giving the refuges more than one purpose.

PUBLIC INVOLVEMENT

In fall 2007, the Service began the public scoping for this project with the publication of a public involvement summary and a planning update that described the CCP process and anticipated schedule (FWS 2007a). The Service published a notice of intent to prepare a CCP and EIS in the Federal Register on December 4, 2007. Since then, the Service has conducted 21 public meetings during scoping and development of the alternatives, mailed six planning updates, posted information on the Web page for the CCP, and coordinated with Federal, State, and local agencies, and Native American tribes.



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The scoping process identified the qualities of the refuge and issues of concern.

SIGNIFICANT ISSUES

The scoping process identified many qualities of the refuge along with issues and recommendations. Based on this information as well as guidance from the Improvement Act, National Environmental Policy Act, and planning policy, the Service identified seven significant issues to address in the CCP and EIS:

- habitat and wildlife
- water resources
- public use and access
- wilderness
- socioeconomics
- partnerships and collaboration
- cultural values, traditions, and resources

HABITAT and WILDLIFE

The final CCP and EIS addresses the following habitat and wildlife issues:

- the use and role of wildfire, livestock grazing (including water resources needed to support livestock), hunting, fencing, and other management tools for the preservation and restoration of habitat conditions on the refuge
- habitat and wildlife management in the context of the larger landscape that includes adjacent private, State, tribal, and Federal lands
- species reintroductions and management of species that could move onto the refuge such as wild American bison, gray wolf, grizzly bear, and Rocky Mountain bighorn sheep
- special consideration of threatened and endangered species and species of concern
- invasive species and noxious weed management including the management tools used to combat invasive species
- predator management

WATER RESOURCES

Wildlife populations, both on and off the refuge, are affected by water quality and access to water. Livestock grazing has degraded habitat, particularly near water sources. Furthermore, stock watering ponds can affect streamflow, fish, and riparian areas conditions. The final CCP and EIS addresses the following important water issues:

- water quality and quantity
- water development
- Missouri River riparian ecosystem
- water rights

PUBLIC USE and ACCESS

The Service allows the public uses of hunting, fishing, wildlife observation, photography, interpretation, and environmental education. In addition, the Service supports these uses by providing associated access and facilities such as roads, motorized access, and camping. The final CCP and EIS addresses the following public use and access issues:

- priority public uses—hunting, fishing, wildlife observation, photography, interpretation, and environmental education
- motorized and nonmotorized access and law enforcement
- roads including number, location, types, and maintenance
- nonpriority uses such as camping and bicycling
- facilities, programs, and infrastructure to support public uses and access
- permitted uses such as livestock grazing, commercial recreation, or other uses

WILDERNESS

Planning policy requires refuges to review special designation areas such as wilderness and address the potential for any new designations. Concurrent with the comprehensive conservation planning and environmental analysis process, the Service conducted a wilderness review and will make final recommendations in the record of decision. The final CCP and EIS addresses the following wilderness issues:

- identification of the potential for new designations
- access, infrastructure, and use of management tools

SOCIOECONOMICS

It is important to manage refuge resources and public use in ways that protect the resources, that are financially responsible, and that are integrated with the economic viability of the surrounding communities. The final CCP and EIS addresses the following socioeconomic issues:

- benefits of the refuge and promotion of refuge values
- a range of alternatives and effects of those alternatives on the local economy and community

PARTNERSHIPS and COLLABORATION

Because of the long, narrow extent of the refuge boundary, the subsequent amount and variety of adjacent land uses not only affect, but also are inter-

related with, refuge resources. Therefore, it is crucial for the Service to collaborate with refuge neighbors and to establish partnerships with interested agencies and groups. Wildlife populations and movements are greatly affected by conditions both outside and inside the refuge. Similarly, invasive species are one of the biggest threats facing State, Federal, and private landowners. Changes in the ownership of private lands next to the refuge may change conditions for habitat, wildlife, and public access. Privately owned mineral rights, future energy development, and rights-of-way influence the future conditions and use of the refuge and adjacent lands. The final CCP and EIS addresses the following partnership and collaboration issues:

- adjacent land management related to habitat, wildlife, and public use
- consultation and coordination with Federal, State, and local partners
- climate change and development of minerals including recommendations for reducing effects on resources
- priorities for future land acquisition

CULTURAL VALUES, TRADITIONS, and RESOURCES

The refuge has significant archaeological resources and rich prehistoric and historic values to the local and regional community. The western traditions and practices of livestock grazing have affected the lives of ranchers and their families for many generations. Of unique value are the significant paleontological resources (fossilized plants and animals). The final CCP and EIS addresses the following cultural, traditions, and resource issues:



Dotted Gayfeather

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- refuge values and qualities
- land management designations
- traditions and lifestyles
- cultural and paleontological resources

VISION

The Service developed a vision for the refuge at the beginning of the planning process. The vision describes the focus of refuge management and portrays a picture of the refuge in 15 years.

Charles M. Russell National Wildlife Refuge's expansive badlands, cottonwood river bottoms, old-growth forested coulees, sagebrush steppes, and mixed-grass prairies appear out of the sea that is the northern Great Plains.

Encompassing more than a million acres, the refuge affords visitors solitude, serenity, and unique opportunities to experience natural settings and wildlife similar to what Native Americans and, later, Lewis and Clark observed.

The diversity of plant and animal communities found on the refuge stretch from the high prairie through the rugged breaks, along the Missouri River, and across Fort Peck Reservoir. The refuge is an outstanding example of a functioning, resilient, and intact landscape in an ever-changing West.

Working together with our neighbors and partners, the Service employs adaptive management rooted in science to protect and improve the biological integrity, biological diversity, and environmental health of the refuge's wildlife and habitat resources.

GOALS

The Service developed eight goals for the refuge based on the Improvement Act, the refuge purposes, and information developed during planning. The goals direct work toward achieving the vision and purposes of the refuge and outline approaches for managing refuge resources.

HABITAT and WILDLIFE MANAGEMENT

Conserve, restore, and improve the biological integrity, environmental health, and ecological diversity of the refuge's plant and animal communities of the Missouri River Breaks and surrounding prairies to support healthy populations of native plants and wildlife in a changing climate. Working with others, reduce and control the spread of nondesirable, nonnative, invasive plant and aquatic species for the benefit of native communities on and off the refuge.

THREATENED and ENDANGERED SPECIES and SPECIES OF CONCERN

Contribute to the identification, preservation, and recovery of threatened and endangered species and species of concern that occur or have historically occurred in the northern Great Plains.

RESEARCH and SCIENCE

Advance the understanding of natural resources, ecological processes, and the effectiveness of management actions in a changing climate in the northern Great Plains through compatible scientific investigations, monitoring, and applied research.

FIRE MANAGEMENT

Manage wildland fire using a management response that promotes fire's natural role in shaping the landscape while protecting values at risk.

PUBLIC USE and EDUCATION

Provide all visitors quality education, recreation, and outreach opportunities that are appropriate and compatible with the purpose and goals of the refuge and the mission of the National Wildlife Refuge System while maintaining the remote and primitive experience unique to the refuge.

WILDERNESS

Conserve, improve, and promote the wilderness character and associated natural processes of designated and proposed wilderness areas and wilderness study areas within the refuge for all generations.

CULTURAL and PALEONTOLOGICAL RESOURCES

Identify, value, and preserve the significant paleontological and cultural resources of the refuge to connect refuge staff, visitors, and the community to the area's prehistoric and historic past.

REFUGE OPERATIONS and PARTNERSHIPS

Through effective communication and innovative use of technology and resources, the refuge uses funding, personnel, partnerships, and volunteer programs for the benefit of natural resources while recognizing the social and economic connection of the refuge to adjacent communities.

ALTERNATIVES

Following the initial scoping process in 2007 and 2008, the Service held meetings and workshops with the cooperating agencies and the public and identified a reasonable range of preliminary alternatives. The Service carried forward the following four alternatives and analyzed them in detail in this environmental impact statement:

- Alternative A—No Action
- Alternative B—Wildlife Population Emphasis
- Alternative C—Public Use and Economic Use Emphasis
- Alternative D—Ecological Processes Emphasis (preferred alternative)

These alternatives examine different ways for providing permanent protection and restoration of fish, wildlife, plants, habitats, and other resources and for providing opportunities for the public to engage in compatible wildlife-dependent recreation. Each alternative incorporates specific actions intended to achieve the goals. However, the no-action alternative represents the current, unchanged refuge management and may not meet every aspect of every goal. The no-action alternative provides a basis for comparison of the action alternatives B–D.



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Big game management includes objectives for mule deer.

ELEMENTS COMMON to ALL ALTERNATIVES

The following actions and programs apply to all alternatives:

- protection and management of significant cultural and paleontological resources
- special regulations for public access on the refuge
- landing sites for seaplanes
- collection of grazing fees
- collaboration with U.S. Army Corps of Engineers
- protection of UL Bend Wilderness and management as a class 1 air shed
- closure of roads in proposed wilderness units except for roads that provide access to private land within the refuge
- wildfire suppression and use of prescribed fire under an approved fire management plan
- collaboration with partners to carry out the plan
- suppression of wildfires and issuance of special use permits for grazing on State school-section lands within the boundary of the refuge
- integrated pest management
- capping of artesian wells
- adjudication of water rights
- access to State lands for livestock permittees
- exchange of State lands within the refuge boundary where feasible
- acquisition of priority lands within the refuge boundary from willing sellers
- jurisdiction transfer for lands not needed by U.S. Army Corps of Engineers
- adherence to legal obligations of rights-of-way for access to private and State lands
- boating
- partnerships for providing accessible opportunities
- prohibition of shed hunting
- protection of areas with special designations such as historic trails, landmarks, research areas, and scenic rivers
- evaluation of predator control for appropriateness and compatibility

ALTERNATIVE A—NO ACTION

Few changes would occur in the management of existing wildlife populations and habitat. Wildlife-dependent public uses and economic uses would continue at current levels. Key actions of alternative A follow:

- There would be a continued emphasis on big game management, annual livestock grazing, use of fencing for pastures, invasive species control,



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A range of alternatives was identified for managing the 1.1 million-acre refuge.

and water development. Habitat would continue to be managed in the 65 habitat units that were established by the Bureau of Land Management for grazing purposes. Prescriptive grazing would be carried out gradually as units became available and habitat evaluations were completed.

- Big game would be managed to achieve target levels in the 1986 environmental impact statement record of decision: 160 bighorn sheep, 10 mule deer per square mile, and 2.5 elk per square mile. This would include a more restrictive rifle season for mule deer in some State hunting districts as compared with the State season.
- Select stock ponds would be maintained or rehabilitated. Riparian habitat would be restored where possible and standard watershed management practices would be enforced.
- Access would be allowed on 670 miles of refuge roads.
- About 155,288 acres of proposed wilderness within 15 units of the Charles M. Russell Refuge would be managed in accordance with Service policy.

ALTERNATIVE B—WILDLIFE POPULATION EMPHASIS

The Service would manage the landscape, in cooperation with partners, to emphasize the abundance of wildlife populations using balanced natural ecological processes such as fire and herbivory by wild ungulates and responsible farming practices and tree planting. Wildlife-dependent public use would be encouraged, and economic uses would be limited when they compete for habitat resources. Key actions of alternative B follow:

- The Service would actively manage and manipulate habitat, thus creating a diverse plant commu-

nity of highly productive wildlife food and cover plants. The management emphasis would be on habitat for targeted wildlife species, including focal bird species, in separate parts of the refuge. The Service would consolidate the 65 habitat units. Subsequently, the refuge staff would write new habitat management plans based on field station boundaries and habitat evaluation for target species. The Service would work with others to develop methods to monitor and evaluate target or focal species and habitat needs.

- Desired habitat conditions may be created using natural ecological processes (such as fire, grazing by wildlife, or flooding) or through management practices (such as prescriptive livestock grazing, agricultural plantings or managed fire).
- An aggressive approach to reduction of invasive plants in the river bottoms would be based on funding and other staffing priorities. Work would include use of prescribed fire, spraying with herbicides, and planting of wildlife food crops to clear invasive plants. In addition, the Service would collaborate with others to combat invasive plants in shoreline habitat. Where feasible and combined with research, the Service would restore the functioning condition of riparian areas and preserve fire refugia (places where fire rarely burns).
- Through cooperation and collaboration with the Montana Department of Fish, Wildlife and Parks and adjoining landowners, the Service would use wildlife- and habitat-based objectives and strategies that consider natural densities, social structures, and population dynamics at the landscape level. The Service and cooperators would mutually agree on population levels that can be tolerated by adjoining landowners and provide quality recreational experiences without negatively affecting habitat or other wildlife. The

Service would collaborate with others to manage wildlife to benefit all species in and around the refuge, actions could include conservation easements or other incentives.

- The Service would cooperate with Montana Department of Fish, Wildlife and Parks; Bureau of Land Management; Montana Department of Natural Resources and Conservation; conservation organizations; and others to conduct the necessary biological, social, and economic research to determine the feasibility of a restoration effort for wild bison on the surrounding landscape.
- The Service would identify habitat suitable for bighorn sheep and establish new populations based on the Montana Department of Fish, Wildlife and Parks' modeling and transplant criteria. The Service would work with the department to provide quality hunting opportunities as a management tool that maintains both sustainable populations of big game and habitat for nongame species.
- In managing the hunting program, the Service would seek to benefit wildlife populations and promote harvest experiences that are not always achieved on other public lands. An example would be providing opportunities to hunt big game animals with all age classes represented (i.e., mule deer in the 8- to 10-year class).
- The Service would close about 106 miles of road and would work with partners to develop a travel plan and secure access to the refuge through other lands. Nonmotorized access would be promoted, but the Service would consider allowing motorized access on existing roads only for game retrieval and restricting access on a seasonal basis to sensitive areas by the river and roads.
- Opportunities for expanding hunting programs would be considered to encourage and facilitate young hunters and mobility-impaired hunters. Limited hunts for furbearers or other predators would be considered only if monitoring verified that population levels could be sustained.
- The Service would expand or adjust by 25,869 acres the existing proposed wilderness units: Alkali Creek, Antelope Creek, Crooked Creek, East Seven Blackfoot, Mickey Butte, Sheep Creek, Wagon Coulee, West Beauchamp Creek, and West Hell Creek.

ALTERNATIVE C—PUBLIC USE and ECONOMIC USE EMPHASIS

The Service would manage the landscape, in cooperation with partners, to emphasize and promote the maximum, compatible, wildlife-dependent public use and economic uses while protecting wildlife populations and habitats to the extent possible. Damaging



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The alternatives address a variety of public uses including hunting and access.

effects on wildlife habitats would be minimized while using a variety of management tools to enhance and diversify public and economic opportunities. Key actions of alternative C follow:

- In addition to the habitat elements in alternative A, the Service would generally manage habitats to provide more opportunities for wildlife-dependent recreation. In places, the refuge staff would manage for plant communities that could necessitate a compromise between providing wildlife food and cover and livestock forage needs. Where needed, fencing and water gaps would be used to manage livestock use and prevent further degradation of riparian habitat. Camping areas would be managed to limit expansion and further degradation of riparian habitat.
- Through collaboration with the Montana Department of Fish, Wildlife and Parks and others, the Service would keep a balance between numbers of big game and livestock to sustain habitats and populations of big game and sharp-tailed grouse. Similar balancing could be necessary when managing populations of nongame or migratory birds and livestock needs. For example, it could be necessary to balance prairie dog needs with public and economic uses such as livestock grazing or with needs of other wildlife.
- Working with the Montana Department of Fish, Wildlife and Parks, the Service would expand and maximize the following hunting opportunities: (1) programs to include new species and traditional or

niche (primitive weapon) hunting; (2) mule deer season; (3) predator hunting; (4) trapping; and (5) opportunities for young hunters.

- Refuge access would be managed to benefit public and economic uses. The Service would improve access to boat ramps and consider establishing new roads in some areas and seasonally closing other areas, such as those around Fort Peck, to protect habitat and to provide for a diversity of experience.
- Wilderness areas would be managed similar to alternative A (155,288 acres in 15 units).

ALTERNATIVE D—ECOLOGICAL PROCESSES EMPHASIS (Preferred Alternative)

In cooperation with partners, the Service would use natural, dynamic, ecological processes and management activities in a balanced, responsible manner to restore and maintain the biological diversity, biological integrity, and environmental health of the refuge. Once natural processes are restored, a more passive approach (less human assistance) would be favored. There would be quality wildlife-dependent public uses and experiences. Economic uses would be limited when they are injurious to ecological processes. Key actions of alternative D follow:

- Where feasible, the Service would apply management practices that mimic and restore natural processes on the refuge, managing for a diversity of plant species and wildlife species in upland and riparian areas. This would include a concerted manipulation of habitats or wildlife populations (using prescribed fire and grazing and hunting) through coordinated objectives. Management would evolve toward more passive approaches, allowing natural processes such as fire, grazing, and flooding to occur with less human aid or money.
- The Service would maintain plant diversity and health using fire in combination with wild ungulate herbivory or prescriptive livestock grazing, or both, to ensure the viability of populations of sentinel plants (those plant species that decline first when management practices are injurious and in concert with other focal bird species or special status wildlife species; see appendix F).
- In collaboration with the Montana Department of Fish, Wildlife and Parks and others, the Service would maintain the health and diversity of all species' populations including focal birds and other migratory birds, threatened and endangered species, species of concern, game species, and nongame species by restoring and maintaining



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The use of prescribed fire, wildfire, and grazing by wild ungulates and livestock is addressed.

balanced, self-sustaining populations. This could include manipulating livestock grazing and wildlife numbers, or both, if habitat monitoring found that conditions were declining or plant species were being affected by overuse. Predators would be managed to benefit the ecological integrity of the refuge. Limited hunting for mountain lion or other furbearers or predators would be considered only after monitoring verified that population levels could be sustained with a hunt.

- The Service would cooperate with Montana Department of Fish, Wildlife and Parks; Bureau of Land Management; Montana Department of Natural Resources and Conservation; conservation organizations; and others to conduct the necessary biological, social, and economic research to determine the feasibility of a restoration effort for wild bison on the surrounding landscape.
- The Service would cooperate with Montana Department of Fish, Wildlife and Parks to provide hunting experiences that keep game species at levels that meet State objectives, sustain ecological health, and provide opportunities not found on other public lands. The Service would develop cooperative big game population and habitat monitoring programs with the department. During development of habitat management plans, the Service would establish population levels, sex and age composition targets, and harvest strategies that are jointly agreed to and tailored to the varied habitat potential on the refuge. Hunting regulations would be designed to provide a variety of quality recreational opportunities including population objectives with diverse male age structures not generally managed for on other public lands.
- Refuge access would be managed primarily to benefit natural processes, but some improvements would be made to provide quality visitor experiences. Initially, the Service would close about 21 miles of roads, implement a seasonal closure along 2.4 miles of road 315, and designate 13 miles of roads on the northeast side of the refuge as game-retrieval roads where seasonal closures would be applied. Other closures or modifications could be necessary after further review of the road program. This would encourage free movement of wildlife, permit prescribed fire or wildfire suppression activities, and increase effective harvest of wild ungulates. Additionally, the Service would upgrade about 5 miles of roads to all-weather access (gravel), allow for more winter fishing access, and expand opportunities for quality wildlife observation, interpretation, and environmental education by adding trails, viewing blinds, and a science interpretive center.

- The Service would expand or adjust existing proposed wilderness units by 19,942 acres in Alkali Creek, Antelope Creek, Crooked Creek, East Seven Blackfoot, Mickey Butte, Sheep Creek, Wagon Coulee, and West Hell Creek.

OBJECTIVES and STRATEGIES

Based on the vision and goals for the refuge, the Service has developed objectives and strategies for each alternative. An objective is a general statement about what the Service wants to achieve on the refuge, while a strategy is a specific action or tool that is used to achieve an objective. Because each alternative has a different emphasis, objectives vary by alternative. The following summarizes key objective topics addressed for each alternative in the final CCP and EIS:

- management of four broad categories of vegetation found on the refuge: upland, river bottom, riparian area and wetland, and shoreline
- use of fire (both prescribed and wildfire), grazing by wildlife and livestock, restoration, predation, and hunting in managing refuge's uplands, river bottoms, riparian areas, and shoreline
- managing for climate change and controlling invasive species
- management of birds; threatened and endangered species or species of concern; furbearers and small predators; big game; and other wildlife such as invertebrates, amphibians, reptiles, fish, and small mammals
- public uses including hunting, fishing, wildlife observation, photography, and interpretation,



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The affected environment chapter describes the resources at the refuge including greater sage-grouse.

and the management of commercial outfitting, recreation areas, and public access

- management of wilderness and other special area designations and the protection of significant cultural and paleontological resources
- refuge operations and partnerships

AFFECTED ENVIRONMENT

The final CCP and EIS describes the characteristics and resources of the refuge and how existing or past management or other influences have affected these resources. The affected environment addresses the physical, biological, and social aspects of the refuge that could be affected by management under the four alternatives. These aspects include the physical and biological environment, special management areas, visitor services, cultural and paleontological resources, and the socioeconomic environment. The Service used published and unpublished data, as noted in the bibliography, to quantify what is known about the refuge.

ENVIRONMENTAL CONSEQUENCES

The alternatives for refuge management would provide a variety of positive effects (benefits) and negative effects (impacts) to resources at Charles M. Russell National Wildlife Refuge and UL Bend National Wildlife Refuge. Some of the greatest benefits would come from consolidating habitat units and managing the upland vegetation to create a mosaic of habitats using prescribed fire, naturally occurring wildfires, and prescriptive grazing to support a diversity of species and improve the overall health of the refuge. The Service would restore numerous former agricultural river bottoms by reducing invasive plant infestations and planting native species. Another significant benefit would be the improved function and quality of riparian areas for wildlife using prescriptive grazing, possible water impoundment removal or modification, and restoration projects.

The greatest effect on refuge resources would be the continuation of current fire suppression strategies and constant grazing pressure over large parts of the refuge under alternative A. While the overall economic effects of any alternative would be beneficial, implementation of new grazing and habitat management approaches in alternatives B or D would result in impacts to individual livestock permittees. From a habitat perspective, the action alternatives (B, C, and D) would benefit upland and riparian hab-

itats, with alternatives B and D resulting in moderate to major long-term benefits to both habitat and wildlife. These and other effects including a description of their context, intensity, and duration are described in detail in chapter 5. The degree of effect was quantified using known numeric or modeled estimates or information derived from extensive monitoring or research. Where sufficient numeric information was not available, qualitative or relative assessments were made using scientific literature or professional field experience.

PHYSICAL ENVIRONMENT

The slower transition to prescriptive grazing under alternatives A and C could cause moderate to major negative effects on soils, while the transition to prescriptive grazing over a shorter period, and over most of the refuge in alternatives B and D, would reduce those impacts in the long term. The use of prescribed fire in any alternative would generally result in short-term, negligible, negative effects on air quality, visual resources, and soils. The impacts of large wildfires on these resources would be major under alternative A and would be minor to moderate under alternatives B–D.

Livestock grazing in some areas would result in moderate to major negative effects on soils under alternatives A and C, while prescriptive grazing in alternatives B and D would reduce those impacts over the long term. The aesthetic impacts of livestock grazing and prescribed fire on visual resources for some refuge visitors would be negligible to minor under alternatives A and C, while they would be moderate benefits under alternatives B and D.

The overall impacts of motorized use on soundscapes would be negligible to minor under all alternatives.

BIOLOGICAL ENVIRONMENT

The continuation of current management of uplands under alternative A would have minor short-term impacts, with moderate to major long-term impacts. The localized effects of alternative B on upland habitat would be variable but overall would result in moderate long-term benefits. Increased prescriptive grazing and balanced ungulate use under alternative C would result in minor long-term benefits. Efforts to restore natural processes under alternative D would result in major long-term benefits to uplands.

Ongoing habitat protection and water impoundment removal or improvement would benefit riparian areas and wetlands. Over the long term, these benefits would be minor under alternative A, moderate under alternative B, minor to moderate under alternative C, and moderate to major under alternative D. In all alternatives, localized moderate



Implementation of the action alternatives (B–D) would have the greatest benefit to riparian areas.



The 670 miles of roads that crisscross the refuge affect the physical, biological, and public environment.

impacts from grazing on riparian habitat would persist in some areas. While the approaches and time-frame would vary, river bottom restoration in all alternatives would result in minor to moderate long-term benefits. Effects of the alternatives on shoreline habitat would be negligible.

Under alternative A, continued negative effects on bird habitat would generally offset the benefits of protection and enhancement efforts, resulting in negligible effects. Habitat protection and management efforts in the action alternatives (B–D) would benefit birds on the refuge. These long-term benefits would be moderate to major under alternatives B and D, and minor under alternative C. In all alternatives, moderate to major localized impacts would continue to occur in some areas due to grazing.

As the Service is required to manage for the benefit of special status species, alternative A, with no specific objectives, would have negligible effects. More active management of threatened and endangered species and species of concern under the action

alternatives (B–D) would have moderate to major long-term benefits for those species.

Continued management of furbearers and small predators would have negligible effects. Alternative B would have major long-term benefits to furbearers and small predators due to reintroductions, while alternative C would have minor to major impacts due to increased harvest. The effects of alternative D would be negligible.

While the big game management emphases and approaches would vary, all alternatives would benefit big game populations. Over the long term, these benefits would be minor under alternative A, minor to moderate under alternative B, and moderate under alternatives C and D.

Continued habitat degradation under alternative A would have minor, incremental, negative effects on amphibians, reptiles, fish, and small mammals, while habitat improvements under the action alternatives would benefit those species. Benefits would be moderate under alternative B, minor under alternative C, and moderate to major under alternative D.

SPECIAL MANAGEMENT AREAS

Alternative A would keep the current and proposed wilderness configurations. Expansion of proposed wilderness units under alternatives B and D would result in minor benefits. None of the alternatives would affect the designation or management of other special management areas.

VISITOR SERVICES

Continuation of current hunting opportunities and management under alternative A would have negligible effects, while the action alternatives (B–D) would have varying benefits to hunting. Expanded hunting opportunities under alternative B would have negligible to minor benefits, while an expanded emphasis on hunting opportunities and harvest under alternative C would have minor to moderate benefits. The benefits of higher quality hunting opportunities under alternative D would be minor to moderate, depending on the preferences of individual hunters. None of the alternatives would affect fishing.

Alternative A would have negligible effects on wildlife observation and photography. Increases in personnel, facilities, and programs would result in negligible to minor benefits under alternative B and moderate benefits under alternatives C and D. Limited environmental education, interpretation, and outreach under alternative A would have negligible effects. Alternative B would have negligible benefits due to more staff and program and facility improvements. Alternatives C and D would have minor benefits due to expanded staff and facilities. Effects on



Brett Billings / USFWS

Fishing would continue to be a popular activity under all alternatives.

commercial uses would be negligible under all alternatives except for alternative C, which would have minor benefits due to more permits and efforts to reduce conflicts.

Under alternative A, access would remain as it is currently with 670 miles of road open to visitors. Alternative B would result in minor negative effects on vehicle access, with 106 miles of road closures, while the 21 miles of closed roads and 15 miles of seasonal closures in alternative D would have negligible impacts. Alternatives C and D would consider allowing more winter fishing access along the southwest side. There would be 16 miles of upgrades to roads under alternative C and 5 miles in alternative D, which would have minor benefits. The impacts of specific road closures would be greater for individuals who prefer to access the refuge by those particular routes.

CULTURAL and PALEONTOLOGICAL RESOURCES

While alternative A would have negligible effects, all of the action alternatives (B–D) would have negligible to minor benefits on cultural and paleontological resources due to improved resource identification, protection, law enforcement, and interpretation.

SOCIOECONOMIC ENVIRONMENT

The regional economic impacts of refuge management activities, including local economic output and

jobs, would be negligible under alternatives A and B. Alternatives C and D would result in minor benefits. Alternative C would generate \$3.9 million in local output and 48 additional jobs, and alternative D would generate \$2.1 million in local output and 25 additional jobs.

As the refuge currently supplies less than 1 percent of total animal unit months in the six-county area, any changes in grazing management would have negligible economic effects. However, refuge management changes would affect individual livestock permittees. The negative effects on permittees would be negligible to minor under alternatives A and C and would be potentially moderate to major under alternatives B and D.

COMMENTS on the DRAFT CCP and EIS

The Service received nearly 20,600 comments on the draft CCP and EIS, which was released to the public for review and comment on September 7, 2010. A 60-day comment period for the document closed on November 16, 2010 and then was extended to December 10, 2010. The Service held seven public hearings throughout Montana during the comment period. Refer to appendix B for the public involvement summary and volume 2, which contains public comments and Service responses.

SIGNIFICANT CHANGES in the FINAL CCP and EIS

As a result of public comment on the draft CCP and EIS, the Service made several significant changes while preparing the final CCP and EIS.

WILDERNESS

- Revised appendix E and clarified that any additions would become wilderness study areas (existing proposed wilderness units would remain the same).
- Modified the acreage for the wilderness study areas in alternatives B and D due in part to a mapping error in the draft CCP and EIS (640 acres within East Seven Blackfoot proposed wilderness and next to the Bureau of Land Management wilderness study area was mislabeled as State lands). The Mickey Butte addition was included in alternative D (already considered in alternative B). As a result, the acreage for alternative B would be 25,869 acres, and alternative D would be 19,942 acres.
- Determined that there is not sufficient justification for recommending the removal of any existing proposed wilderness previously considered in alternatives C and D.

ROADS

- Changed road 315 (Petroleum County) in alternative D from closed to seasonally closed from junction of road 838 to its end.
- Designated about 13 miles on the northeast side (roads 331, 332, 333, and 440 in Valley County) as game-retrieval roads in alternative D (previously identified for closure in alternative B only). These would be seasonal closures during the hunting season, when most of the use occurs.

WILDLIFE OBJECTIVES

- Adjusted and clarified the big game objectives. The objectives would meet or exceed the objectives approved in existing State plans. Refuge-specific abundance and population composition objectives would be established through the habitat management planning process and would be tailored to regional habitat conditions, productivity, and considerations for functioning ecosystem processes, biological integrity, and hunting opportunities and experiences.

- Updated the information on threatened and endangered species and species of concern (gray wolf, Sprague's pipit, mountain plover, and northern leopard frog).

HABITAT OBJECTIVES and STRATEGIES

- Clarified and expanded on the prescriptive grazing definition and information.
- Made several organizational changes to the habitat objectives including changing livestock grazing from an objective level to a strategy, which is consistent with Service policy (timeframes would remain the same).
- Clarified that the timeframe for implementation of prescribed grazing under alternative A would be similar to alternative C (50 percent or more would have converted to prescribed grazing over 15 years, based on the current trends for conversion).
- Expanded the discussion on monitoring sentinel plant and the refuge's past monitoring efforts.
- Identified the miles of streams and the percentage of riparian areas within the refuge that would be improved from restoration efforts.

FOCAL BIRD SPECIES

- Identified the focal bird species for each broad habitat category (upland, river bottom, riparian areas and wetland, and shoreline) and connected the sentinel plant monitoring to the focal bird species, particularly in alternative D and to a lesser extent in the other alternatives. Previously, these were identified as potential sentinel bird species. The use of "focal birds" is consistent with the Service's focal bird strategy (FWS 2011c).

MINERALS

- Clarified that mineral withdrawals are for locatable minerals.

LAND ACQUISITION

- Clarified that, under all alternatives, the Service would continue to acquire lands within its authorized boundary and in accordance with Title VIII of the Water Resources Development Act of 2000 (Enhancement Act).

LEGAL MANDATES

- Expanded discussion on the history of the passage of the Improvement Act, Service policies, refuge history, and legal mandates.

WATER QUALITY, AIR MONITORING, and CLIMATE CHANGE

- Added information and clarified these topics.
- Added climate change to several of the goals.

WHAT HAPPENS NEXT

The Service's final decision will be documented in a record of decision published in the Federal Regis-

ter no sooner than 30 days after filing this final EIS and CCP with the U.S. Environmental Protection Agency and distributing it to the public.

The Service will begin to carry out the final CCP immediately on publication of the decision in the Federal Register. Selected management activities and projects will be carried out as funds become available. The final plan does not constitute a commitment for funding, and future budgets could influence implementation priorities.

Abbreviations

ATV	all-terrain vehicle
AUM	animal-unit month
BCR 17	Badlands and Prairies Bird Conservation Region
BLM	Bureau of Land Management
CCP	comprehensive conservation plan
CFR	Code of Federal Regulations
CO₂	Carbon dioxide
DNRC	Montana Department of Natural Resources and Conservation
DOI	U.S. Department of the Interior
EIS	environmental impact statement
Enhancement Act	Title VIII of the Water Resources Development Act of 2000
FWS	U.S. Fish and Wildlife Service
GIS	Geographic Information System
GPS	Global Positioning System
GS	General Schedule (employment type)
HDP	height-density plot
HMP	Habitat Management Plan
IMPLAN	Impact Analysis for Planning
Improvement Act	National Wildlife Refuge System Improvement Act of 1997
MFWP	Montana Department of Fish, Wildlife and Parks
MIAG	Montana/Idaho Airshed Group
NRCS	Natural Resources Conservation Service
Refuge System	National Wildlife Refuge System
region 6	Mountain–Prairie Region of the U.S. Fish and Wildlife Service
RLGIS	Refuge Land Geographic Information System
Service	U.S. Fish and Wildlife Service
TEA–21	1998 Transportation Equity Act for the 21st Century
TES	threatened and endangered species
USACE	U.S. Army Corps of Engineers
U.S.C.	United States Code
USDA	U.S. Department of Agriculture
USFS	USDA Forest Service
USGS	U.S. Geological Survey
WG	wage grade (employment type)
WSA	wilderness study area

Definitions of these and other terms are in the glossary, located after chapter 5.

