

Appendix A

Record of Decision

Record of Decision for the Final Comprehensive Conservation Plan and Environmental Impact Statement

San Luis Valley National Wildlife Refuge Complex

October 2015

Introduction

This record of decision (ROD) for the final comprehensive conservation plan (CCP) and environmental impact statement (EIS) for the San Luis Valley National Wildlife Refuge Complex, Colorado, provides the basis for management decisions made by the U.S. Fish and Wildlife Service (we, Service). The CCP was prepared along with an EIS in compliance with the National Environmental Policy Act (NEPA) and relevant planning policies. We propose to adopt and implement the plan, which will provide guidance on managing the refuges for a 15-year period.

The final CCP and EIS (FR 80 (155): 48328-31) described our proposal for management of the San Luis Valley National Wildlife Refuge Complex (refuge complex), specifically for Alamosa, Monte Vista, and Baca National Wildlife Refuges. These three national wildlife refuges are part of the National Wildlife Refuge System (Refuge System), and they are managed as part of the larger refuge complex from its headquarters located in Alamosa, Colorado. As part of the Refuge System, the three national wildlife refuges are managed for wildlife conservation above all else.

In preparing the final CCP and EIS, we worked closely with several cooperating agencies and partners including the Bureau of Land Management, Bureau of Reclamation, USDA Forest Service, National Park Service, Natural Resources Conservation Service, Colorado Parks and Wildlife, and Colorado Division of Water Resources. Other tribal governments, State and local governmental agencies, nongovernmental organizations, businesses, and private citizens contributed substantial input to the plan.

Background

The primary planning area for this decision is for the Alamosa, Monte Vista, and Baca National Wildlife Refuges, which are located in Alamosa, Rio Grande, and Saguache counties in the San Luis Valley, Colorado. While not directly related to this decision, the refuge complex also has management responsibility for the Sangre de Cristo Conservation Area in Costilla County, Colorado, and Taos County, New Mexico. A land protection plan for the Sangre de Cristo Conservation Area was finalized in 2012.

Wildlife habitat in the three national wildlife refuges includes diverse wetlands and playas, riparian areas, grasslands, and shrublands that provide important resources for many migratory birds, Rocky Mountain elk, deer, and a variety of other resident wildlife. About 18,000–20,000 greater sandhill cranes migrate through the valley every spring and fall, where they spend several weeks resting and foraging for food on and around the Monte Vista National Wildlife Refuge. The southwestern willow flycatcher, which is federally listed as endangered, breeds along the Rio Grande on the Alamosa National Wildlife Refuge. Baca National Wildlife has one of two aboriginal (natural) populations of Rio Grande sucker found in the State.

Visitors take part in a variety of wildlife-dependent recreational activities on the refuge complex. Every year, the Monte Vista Crane Festival attracts thousands of visitors who come to see sandhill cranes and waterfowl. The Monte Vista and Alamosa National Wildlife Refuges are also open for waterfowl and limited small game hunting, wildlife observation, photography, interpretation, and environmental education. As part of this CCP and EIS process, we have considered opening the Baca National Wildlife Refuge for similar opportunities.

Over 12,000 years of prehistory and history have been recorded in the San Luis Valley, and all three national wildlife refuges contain significant cultural resources.

We could not accomplish our conservation mission without the many partner organizations who we work with in the valley, including the Friends of the San Luis Valley National Wildlife Refuges; The Nature Conservancy; local land trusts; schools; Federal, State and local governmental agencies; Native American tribes; and interested citizens.

Purpose and Need for the Plan

The purpose of this final CCP and EIS is twofold: to describe the role of each refuge in the complex in supporting the mission of the Refuge System and to provide long-term guidance for the management of refuge programs and activities. The CCP is needed to help us achieve the following:

- communicate with the public and other partners in efforts to carry out the mission of the Refuge System;
- provide a clear statement of direction for management of the refuge complex;
- ensure that the refuges within the refuge complex continue to conserve fish, wildlife, and ecosystems in the face of ongoing drought, water shortages, and climate change;
- provide neighbors, visitors, and government officials with an understanding of our management actions on and around the refuge;
- ensure that our management actions are consistent with the mandates of the National Wildlife Refuge Improvement Act of 1997;
- ensure that management of the refuge considers other Federal, State, and local government plans;
- provide a basis for development of budget requests for the operation, maintenance, and capital improvement needs of the refuge.

We are committed to sustaining the Nation's fish and wildlife resources together through the com-

bined efforts of governments, businesses, and private citizens.

National Wildlife Refuge System

Like all national wildlife refuges, Alamosa, Monte Vista, and Baca National Wildlife Refuges are administered under the National Wildlife Refuge System Act of 1966 as amended by the National Wildlife Refuge System Improvement Act of 1997.

The mission of the 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.

Monte Vista and Alamosa Refuges were set aside under the same authority and consequently have identical purposes. They were established under the authority of the 1929 Migratory Bird Conservation Act (45 Stat. 1222; 16 U.S.C. §715d) "...for use as inviolate sanctuaries, or for any other management purposes, for migratory birds."

Monte Vista National Wildlife Refuge was established in 1952, and Alamosa National Wildlife Refuge was established in 1962. Today, Monte Vista National Wildlife Refuge is about 14,834 acres and Alamosa National Wildlife Refuge is about 12,026 acres.

Baca National Wildlife Refuge was authorized by Public Law 106-530 on November 22, 2000, as part of the Great Sand Dunes National Park and Preserve Act of 2000. In 2009, the Act was amended to explain the purpose and provide for the administration of the refuge (Public Law 111-8; Omnibus Appropriation Act, March 11, 2009). The purpose of the Baca National Wildlife Refuge is to "restore, enhance, and maintain wetland, upland, riparian, and other habitats for native wildlife, plant, and fish species in the San Luis Valley." In administering the Baca National Wildlife Refuge, the Secretary shall, to the maximum extent practicable, "(A) emphasize migratory bird conservation; (B) take into consideration the role of the Refuge in broader landscape conservation efforts; and (C) [subject to any agreement in existence as of the date of enactment of this paragraph, and to the extent consistent with the purposes of the

refuge], use decreed water rights on the refuge in approximately the same manner that the water rights have been used historically.” We have acquired about 85,941 acres of the authorized 92,500 acre area.

Vision

We developed a vision for the refuge complex at the beginning of the planning process which describes the focus of refuge management and portrays a picture of the refuge complex in 15 years. It reads:

The San Luis Valley National Wildlife Refuge Complex, set in a high expansive desert valley, is cradled between the snowcapped peaks of the San Juan and Sangre de Cristo Ranges. Mountain snowmelt feeds the Rio Grande, numerous streams, and a dynamic ground water system, creating a diverse mix of playas, wet meadows, and willow and cottonwood riparian corridors that are in stark contrast with the surrounding arid landscape. As reflected by 12,000 years of human history in the valley, the refuge complex attracts many people. Visitors experience the ancient song of the sandhill crane, witness evening flights of thousands of waterfowl, and listen to bugling elk. Through ever-changing conditions like climate change, the refuges support and foster a collaborative spirit between their neighbors and partners to conserve the valley’s treasured resources.

Goals

We developed six goals for the final CCP.

Habitat and Wildlife Goal

Conserve, restore, and enhance the ecological diversity and function of the San Luis Valley ecosystem to support healthy populations of native fish and wildlife, with an emphasis on migratory birds.

Water Resources Goal

As climate patterns change, protect, acquire, and manage surface and ground water resources to maintain and support management objectives.

Visitor Services Goal

Provide safe, accessible, and quality wildlife-dependent recreation and perform outreach to visitors and local communities to nurture an appreciation and understanding of the unique natural and cultural resources of the refuge complex and the San Luis Valley.

Partnerships and Refuge Complex Operations Goal

Secure and effectively use funding, staffing, and partnerships for the benefit of all resources in support of the refuge complex purposes and the mission of the National Wildlife Refuge System.

Actively pursue and continue to foster partnerships with other agencies, organizations, the water community, and private landowners to conserve, manage, and provide for the long-term sustainability of working landscapes within the San Luis Valley.

Cultural Resources Goal

Protect significant cultural resources within the San Luis Valley National Wildlife Refuge Complex.

Research, Science, and Wilderness Review Goal

Use sound science, applied research, monitoring, and evaluation to advance the understanding of natural resource functions, changing climate conditions, and wilderness values in the management of the habitats within the San Luis Valley ecosystem.

Significant Issues

In the EIS, we disclosed the effects of four management alternatives derived from significant issues that were identified during the scoping process. The significant issues addressed in the final CCP and EIS include:

- Habitat and wildlife management
- Water resources
- Landscape conservation and wilderness review
- Visitor services
- Partnerships and refuge complex operations
- Partnerships and collaboration
- Cultural resources and tribal coordination

Decision (Alternative B)

We selected for implementation alternative B – Wildlife Populations, Strategic Habitat Restoration, and Enhanced Public Uses. Alternative B was selected because it is the alternative that best meets our vision and planning goals for this project. It will enable us to maintain or restore the composition, structure, and function of the natural and modified habitats within the refuge complex. We will consider the ecological site characteristics and wildlife species needs on our refuge lands by developing sound and sustainable management strategies that preserve and restore ecological (biological) integrity, productivity, and biological diversity. We will apply strategic habitat conservation principles (a structured, science-driven, and adaptive approach) in determining how to best manage our lands for native fish, wildlife, and plant species, with a particular emphasis on migratory birds, waterfowl, and declining species listed under the Endangered Species Act (listed species). Compatible wildlife-dependent public uses will be enhanced and expanded to include all three refuges. We will facilitate the protection, restoration, and conservation of important water resources through partnerships, public education, and stewardship.

Habitat and Wildlife

We will manage wetland areas within the refuge complex to achieve a variety of wetland types and conditions to support a diversity of migratory birds and other wildlife, with a specific focus on focal species that represent the Service's and other partners' larger conservation goals. To maintain the biological integrity, productivity, and function of our wetland habitat, we will restore historical water flow patterns in specific areas through more effective water management practices. Our top priority will be to restore riparian habitat along streams in the Baca National Wildlife Refuge as well as specific areas along the Rio Grande in the Alamosa National Wildlife Refuge. We will manage our upland habitats to create a variety of seral stage conditions that provide habitat for a diverse array of wildlife species, particularly nesting and migratory focal birds. To manage our habitats, we will continue using tools such as prescriptive grazing, haying, fire, mowing, and herbicides.

We will use public hunting to complement the State's management, working together to keep elk populations at levels that will allow us to sustain healthy plant communities both in the refuge complex and on neighboring lands. This will include opening portions of Baca National Wildlife Refuge to public hunting and opening parts of Alamosa and

Monte Vista National Wildlife Refuges to a limited public hunt. We will work with our agency partners (Colorado Parks and Wildlife, National Park Service, USDA Forest Service, Bureau of Land Management) and other conservation organizations to manage elk populations.

We will also work with other Federal and State agencies and other conservation partners to improve habitats for threatened and endangered species and other species of concern. Particular focus will be on riparian areas, which provide essential habitat for southwestern willow flycatcher, and riverine systems, which are habitat for Rio Grande sucker and Rio Grande chub. In addition, habitats for other native species of concern such as Gunnison's prairie dog and northern leopard frog will be protected, restored, and enhanced where practical and necessary.

The existing arrangement with The Nature Conservancy for bison management on former State lands within the Baca National Wildlife Refuge will be phased out. Since bison are important to other stakeholders and partners, we will research the feasibility, potential, and suitability of introducing semi-free-ranging bison year-round to effectively maintain and enhance certain refuge habitats.

We will continue to grow limited amounts of small grain on the Monte Vista National Wildlife Refuge (about 190 acres) to provide necessary food for the Rocky Mountain population of greater sandhill cranes, as specified in the management plan of the Pacific and central flyways for the Rocky Mountain greater sandhill cranes.

We will control and reduce the incidence of invasive weeds such as tall whitetop, Russian knapweed, Canada thistle, saltcedar, and reed canarygrass through more effective management and by using prescribed fire and chemical, mechanical, and biological control methods. We will make every effort to increase weed control in sensitive habitats or where there is a risk of weeds spreading to neighboring private land.

We will strengthen the fire program within the refuge complex by improving fire management planning and by increasing coordination with partners. We will use prescribed fire to achieve habitat management objectives, and we will conduct prescribed fires at a more acceptable and reliable frequency. We will pursue more funding to protect property and human safety under the wildland-urban interface guidelines, and, where possible, we will reduce the number of individual facilities that will require fire protection.

Water Resources

We will continue to work with other landowners and agencies throughout the watershed to maintain flexibility as well as to protect and, if necessary, augment our water rights as State regulations evolve. Water quality standards will be established, and studies will be initiated to help protect water rights, prioritize habitat management and planning, and develop concise water use reporting methods. Our ground water use will comply with new State ground water rules and regulations through augmentation plans or by working with others and contracting with ground water management subdistricts.

We will achieve our habitat management objectives while providing for quality visitor experiences. Our water infrastructure, delivery, and efficiencies will require upgrades to make sure that habitat and visitor services objectives are met.

Visitor Services

We will continue to offer waterfowl and limited small game hunting on the Monte Vista and Alamosa National Wildlife Refuges. We will open the Baca National Wildlife Refuge for big game and limited small game hunting, and we will offer limited big game hunting on the Monte Vista and Alamosa National Wildlife Refuges. This will provide recreational opportunities while enabling us to manage the numbers and distribution of elk and other ungulate species. Access points and parking areas will be developed on the Baca National Wildlife Refuge.

General public access will be improved on the Monte Vista and Alamosa National Wildlife Refuges and established on the Baca National Wildlife Refuge. On the Monte Vista and Alamosa National Wildlife Refuges, we will allow for additional access outside the critical breeding period from about mid-July to the end of February for wildlife viewing and interpretation on roads or trails that are currently open to hunters during the hunting season. We will allow for modes of travel such as cross-country skiing, snowshoeing, and bicycling in order to facilitate opportunities to experience wildlife on all three refuges. Portions of the Baca National Wildlife Refuge will be opened for limited public use, and nonmotorized access, including walking, biking, and horseback riding, will be allowed during hunting season. An auto tour route will be built on the Baca National Wildlife Refuge. The construction of more trails or viewing platforms on the Monte Vista and Alamosa National Wildlife Refuges will be carefully planned to avoid impacts to threatened and endangered species as well as for species of concern. Limited commercial opportunities such as photography will be considered. We will seek funding to build a visitor

center and refuge complex staff offices at either Monte Vista or Alamosa National Wildlife Refuge to better serve the public, provide for safer access to our offices, and provide a modern work environment for our employees. In coordination with the Friends of the San Luis Valley National Wildlife Refuges, which leads this event, we will continue to host the Kid's Fishing Day on the Monte Vista National Wildlife Refuge. On Alamosa Refuge, we will allow limited fishing access on the banks of the Rio Grande just above and below the Chicago Dam.

Cultural Resources

Most of our actions will be similar to alternative A, which is described below, plus we will increase our efforts toward identifying and protecting significant resources.

Partnerships and Refuge Operations

When the Baca National Wildlife Refuge was established under the Great Sand Dunes National Park and Preserve Act of 2000, operations funding did not come with the added management responsibilities. We absorbed these added responsibilities across the refuge complex, which has affected our operations. In order to meet our needs, we will seek more funding for the refuge complex for habitat conservation, visitor services, and maintenance. Overall, refuge complex offices are inadequate and provide for little visitor contact. We will seek to increase our staff levels of both full-time and seasonal employees, as well as seek funding for safe access and accessible offices for our staff and visitors.

We will continue to collaborate with Colorado Parks and Wildlife and other agencies to effectively manage elk, which will hopefully result in an improved distribution across the local game management units. We will continue to work closely with the San Luis Valley Interagency Fire Unit to achieve habitat management objectives while minimizing risk to sensitive habitats and human structures. We will seek funding for a more dependable prescribed fire program. We will develop working relationships with neighboring landowners and others to address interface issues such as invasive species control, shared fence management, elk management, and other concerns.

On the Baca National Wildlife Refuge, we will work extensively with owners and developers of third party-owned mineral rights to find ways to reduce the effects of any future exploration activities on visitors and wildlife and to locate exploration and production facilities away from visitors.

Research, Science, and Wilderness Review

We will increase monitoring efforts, in part to gain an increased understanding of the effects of our management actions on habitat conditions, wildlife populations, and water resources, but also to learn more about the effects of drought and climate change on our wildlife and habitat resources. We will recommend protection of the wilderness values and characteristics found along the eastern boundary of Baca National Wildlife Refuge and adjacent to proposed wilderness on Great Sand Dunes National Park and Preserve (about 13,800 acres). We will manage this area as a wilderness study area to be considered for eventual wilderness designation.

Rationale for Selecting Alternative B

This alternative balances the significant management issues of this project with the purposes, missions, and management policies of the Service, as well as with the interests and perspectives of many agencies, organizations, tribes, and the public.

Overall, we received substantial support for many of the elements in alternative B from our cooperating agencies, local agencies, conservation organizations, and the public. We acknowledge the differing individual views with respect to bison conservation on the Baca National Wildlife Refuge, public hunting, and expanding public use opportunities by opening Baca National Wildlife Refuge.

In the Final CCP and EIS, alternative B was revised from the proposed action in the draft CCP and EIS after consideration of many comments received from agencies, tribes, other stakeholder organizations, and the public during the comment period.

Other Alternatives Considered

The final CCP and EIS evaluated a no-action alternative (A) and two other action alternatives (C and D), which are briefly summarized below. We developed all the alternatives to meet the planning goals we set for the project. Some of the alternatives met specific elements of our planning goals better than others, and we considered this in our decision.

Alternative A: No Action

Under the no-action alternative, we would make few changes in how we manage the various habitats and wildlife populations throughout the refuge complex. We would continue to manage habitats on the Monte Vista and Alamosa National Wildlife Refuges through the manipulation of water as described in the 2003 CCP. Water management on the Baca National Wildlife Refuge would continue under the guidance found in the conceptual management plan for the Baca National Wildlife Refuge. All the refuges would adhere to new State rules and regulations through augmentation plans or by working with others and contracting with ground water management subdistricts. There would be few added public uses outside of those that already occur on the Monte Vista and Alamosa National Wildlife Refuges. The Baca National Wildlife Refuge would remain closed to public use except for potential access to a refuge office or contact station. We would continue to collaborate with our partner agencies and organizations to achieve our conservation goals.

Habitat and Wildlife Resources

On all three refuges, we would continue to manage wetland areas and wet meadows to provide habitat for a variety of waterbirds. We would continue to produce small grains at current levels on the Monte Vista National Wildlife Refuge (up to 270 acres, depending on water availability and crop rotation) to provide food for spring-migrating sandhill cranes.

There would be few changes made in managing big game populations on the refuge complex. Population distribution and control would be limited to non-lethal dispersal, agency culling, and public dispersal hunts (hunters accompanied by agency personnel on a hunt designed to disperse animals) on the former State lands of the Baca National Wildlife Refuge.

We would continue to protect populations of, and manage habitats for, threatened and endangered species as well as for species of concern. We would phase out the existing arrangement with The Nature Conservancy for season-long bison grazing on lands that are within the Baca National Wildlife Refuge acquisition boundary, and we would not use bison as a management tool in the future.

We would continue to use prescriptive livestock grazing and haying, and we would continue to control invasive and noxious weeds.

Water Resources

We would keep our ability to use our water rights within the refuge complex. The use of ground water

would continue, except as modified by changing State rules, regulations, and policies. We will augment water supplies in accordance with State law.

Visitor Services

Compatible wildlife-dependent public uses, including waterfowl and limited small game hunting, would continue to be allowed on the Monte Vista and Alamosa National Wildlife Refuges, but we would not seek to establish elk hunting on any of the refuges other than the authorized distribution hunts on the Baca National Wildlife Refuge.

The auto tour routes and the existing nature and walking trails on the Alamosa and Monte Vista National Wildlife Refuges would continue to provide some wildlife observation, interpretation, and photography opportunities. Public access via trails or a tour route would not be established on the Baca National Wildlife Refuge, and the refuge would remain closed to the public except for occasional staff-led tours and access to an office or visitor contact station.

Cultural Resources

Under Section 106 of the National Historic Preservation Act, we would continue to conduct cultural resource reviews for projects that may disturb the ground or affect buildings or structures over 50 years of age. We would avoid disturbing significant cultural resources unless disturbance is required by unusual circumstances. In addition, we would continue to conduct law enforcement patrols and monitor sensitive sites. As required, we would consult with the Colorado State Historic Preservation Office and Native American tribes and adhere to cultural resource laws.

Partnerships and Refuge Complex Operations

We would continue to work with a variety of other agencies and non-profit organizations, including the Friends of the San Luis Valley National Wildlife Refuges, to achieve our goals for habitat and wildlife management. Refuge complex operations would continue within existing funding levels. As such, there would be few new financial resources available to increase programs or services. We would continue to coordinate and work with adjacent landowners to reduce potential conflicts.

In accordance with the provisions of the interim elk management plan, we would work with Colorado Parks and Wildlife to coordinate dispersal hunts, hazing, and lethal removal of elk by agency staff to

reduce damage to the lands next to the refuges and riparian habitats on the refuges.

We would continue to be active and contributing partners in the San Luis Valley Interagency Fire Management Unit. This partnership includes the USDA Forest Service, National Park Service, Bureau of Land Management, the State of Colorado, and the Service.

Research, Science, and Wilderness Review

Within existing funding levels, we would continue to inventory and monitor habitat and wildlife resources with existing refuge staff as well as by working with the U.S. Geological Survey and other agencies and organizations.

In keeping with current management, we would not recommend additional protection for any areas having wilderness characteristics or values.

Rationale for Not Selecting Alternative A

Alternative A was not selected for implementation because it would not meet our stated planning goals for the CCP for habitat and wildlife management, visitor services, or cultural resources and tribal coordination. Alternative A would only partially satisfy the planning goals we developed for water resources; partnerships and refuge complex operations; and research, science, and wilderness review.

Alternative A would not meet the stated goals for restoring and improving biological integrity, environmental health, and habitat diversity across the refuge complex.

Although we would continue to protect and manage habitat on Alamosa National Wildlife Refuge for riverine, riparian-dependent, and other species, we have no control over the hydrological conditions of the Rio Grande, where willow habitat has been negatively affected due to declining water levels.

On the Baca National Wildlife Refuge, we would continue to address obvious signs of degradation of the five creek corridors using our existing resources (limited monitoring, fencing, and dispersal). However, other than the actions we identified in an interim elk management plan, which includes limited dispersal hunts on the Baca Refuge in the areas formerly owned by the State, few other tools would be available for addressing ongoing elk management concerns within the refuge complex.

Under alternative A, we would continue to provide wetland and roost habitat for migrating sandhill cranes and waterfowl when water is available. Anticipated changes in State water law (ground water rules and regulations) would likely affect the future

volume and timing of available water on the refuge. In the long term, our wetland habitats would not be able to support the migrating and nesting populations of wildlife species that they have in the past.

Alternative A would not satisfy the visitor services goal. There is a lack of dedicated resources for providing visitor services and outreach, and there are relatively few opportunities for most visitors to participate in wildlife-dependent recreation activities on the refuge complex. Baca National Wildlife Refuge would remain closed to public access.

Under the existing CCP and the 2005 conceptual management plan for the Baca Refuge, protection of cultural resources was not identified as a specific goal. Within the existing staff levels, it is difficult to increase protection, monitoring, outreach, interpretation, or partnerships beyond basic adherence to cultural resource laws before implementing new projects. Therefore, alternative A does not satisfy the cultural resources goal or it does so only minimally.

Alternative A would only partially satisfy the research, science, and wilderness review goals of the CCP. No areas would be recommended for protection of wilderness values that are found on Baca National Wildlife Refuge.

As detailed in the Final CCP and EIS, Appendix G, Responses to Comments on the Draft CCP and EIS, we received little public support for continuing to manage the refuge complex under the no-action alternative.

However, some commenters opposed allowing for big game hunting or hunting of any kind either as a management tool or a recreational opportunity. Under alternative A, only the existing waterfowl and limited small game hunting programs would continue on Alamosa and Monte Vista National Wildlife Refuges, but big game hunting would not be used to manage elk. Some felt there should be a 5-year moratorium before implementing a big game hunt. This view was not shared by our cooperating agencies, other conservation organizations, or individuals who support big game hunting on the refuge complex.

Alternative C—Habitat Restoration and Ecological Processes

We would take all feasible actions to restore or mimic, where needed, the native vegetation community based on ecological site characteristics, ecological processes (hydrologic conditions and other natural disturbances such as grazing and fire), and other abiotic factors. We would continue to provide compatible wildlife-dependent public uses, but they

would be adapted in response to changes in area management. Our partnership efforts would be broadened and geared toward restoring native vegetation communities and mimicking natural hydrologic conditions.

Habitat and Wildlife Resources

We would restore vegetative communities in the refuge complex to mimic the ecological conditions that existed before Euro-American settlement of the area. For example, we would restore the function of both the riparian areas and playas on the Baca National Wildlife Refuge and identify potential habitat conditions for the three refuges.

We would apply natural disturbance regimes such as prescribed grazing and fire in other habitats. Where practical, we would restore natural waterflow patterns. We would end production of small grains for migrating sandhill cranes on the Monte Vista National Wildlife Refuge.

We would use hunting to manage the populations and distribution of elk and improve the long-term health of riparian habitat. Similar to alternative B, our priority would be to improve habitat for all native species, but particularly threatened and endangered species and other species of concern. For example, we would actively restore additional cottonwood and willow riparian areas for southwestern willow flycatcher along the Rio Grande on the Alamosa National Wildlife Refuge and reintroduce Rio Grande chub and Rio Grande sucker along creeks on the Baca National Wildlife Refuge where they historically occurred.

As with alternative B, we would phase out the existing arrangement with The Nature Conservancy for bison on former State lands. Knowing that bison occurred historically to some extent in the San Luis Valley, we would attempt to periodically (not every year) use bison on the Baca National Wildlife Refuge to mimic the ecological benefit they may have once provided.

Water Resources

We would manage water to restore the hydrologic conditions with less focus on habitat management for specific species or for providing wildlife viewing. We would evaluate the need to supplement existing water supplies while considering restoration of historic hydrology, especially on the Monte Vista and Alamosa Refuges. In some years, water may not be available to meet life cycle needs for some waterfowl species. We would remove or modify existing water infrastructure as needed. Water quality monitoring would also be increased.

Visitor Services

We would continue to allow waterfowl and limited small game hunting on the Monte Vista and Alamosa Refuges. Similar to alternative B, we would open the Baca Refuge for big game and limited small game hunting. On the Monte Vista and Alamosa Refuges, we would rely on public hunting or limited big-game methods for elk management.

On Alamosa and Monte Vista Refuges, there could be changes in public use, depending on the habitat management action. Some areas could be closed. Current public access would be evaluated on the Alamosa and Monte Vista Refuges. If existing roads or trails are not needed or if these facilities fragment habitat, they could be removed or altered. Viewing areas for sandhill cranes could be moved, depending on restoration efforts. Service participation in the Monte Vista Crane Festival could be adjusted, depending on changes in the location and concentration of sandhill cranes. We would provide on-site interpretation and environmental education programs on the Alamosa and Monte Vista Refuges as funding allows, and our key messages would relate to our restoration efforts.

Except for limited hunting access to achieve management objectives, there would be no facilities or programs on the Baca Refuge. For example, an auto tour route, nature trails, and restrooms would not be developed.

Cultural Resources and Tribal Coordination

Actions would be similar to those under alternative B but more structures could be removed and there would be less educational outreach.

Partnerships and Refuge Complex Operations

We would seek to increase partnerships with a variety of agencies, organizations, and universities to achieve management objectives, restore ecological processes, and improve the efficiency of overall refuge management operations. On all refuges, roads would be evaluated, and roads that are not needed or that are fragmenting habitat would be removed.

Research, Science, and Wilderness Review

Similar to alternative B, we would increase efforts in studying habitats and wildlife, particularly

with respect to climate change as well as to land and water protection.

Also similar to alternative B, we would recommend that about 13,800 acres along the southeastern boundary of the Baca Refuge be managed as a wilderness study area.

Rationale for Not Selecting Alternative C

Alternative C was not selected for implementation. Although alternative C could be the best alternative for restoring the long-term biological health and ecological function of the refuge complex, there would likely be fewer wetlands and subsequently fewer waterfowl and other waterbirds, including sandhill cranes, that could be supported on the refuge complex.

Alternative C would partially satisfy our visitor services goal by opening the Baca Refuge to public hunting. We would add more staff for visitor services programming on the refuge complex. The elimination of grain production for cranes and the loss of at least one roost area could have a major negative effect on wildlife viewing on Monte Vista Refuge. Alternative C would provide for the least amount of accessible facilities on the refuge complex.

Alternative C would partially achieve our goals for cultural resources and tribal coordination. Insignificant structures that are not needed for refuge operations could be removed, and new cultural resource priorities would be established. With more management focus on restoration of vegetative communities, there would not be the educational outreach and volunteer and interpretive opportunities that were identified under alternatives B and D that were related to cultural resources. Alternative C would satisfy our goals for partnerships; refuge complex operations; and research, science, and wilderness review.

Overall, we received only a few comments in support of alternative C. None of our cooperating agencies supported alternative C. One tribe supported alternative C, primarily because of the desire for fewer public use opportunities. Several commenters expressed concerns about eliminating grain production on Monte Vista Refuge and the potential effects it would have on greater sandhill cranes. Several commenters supported the idea of rotating water through the playas more frequently than under alternative B.

Alternative D—Maximize Public Use Opportunities

We would manage wildlife and habitats on the refuge complex consistent with our mission and the purposes of the refuges while emphasizing quality visitor experiences and compatible wildlife-dependent public uses. Partnerships that complement our efforts to accommodate and provide for the priority public uses would be strengthened.

Habitat and Wildlife Resources

Similar to alternative A, we would manage wetlands to maximize waterbird production at the Monte Vista and Alamosa National Wildlife Refuges. We would also irrigate areas that are closer to public access and viewing areas at the Baca Refuge to enhance wildlife viewing. Riparian and upland habitats would be conserved for migratory birds. We would increase the agricultural production of small grains for sandhill cranes on the Monte Vista National Wildlife Refuge (about 230 acres), and grain production could also be used in a specific place or time to enhance wildlife viewing. A key difference from alternatives A and C, but similar to alternative B is that we would improve public education about the role that the refuge complex plays in the San Luis Valley and across the Refuge System.

We would offer opportunities for elk hunting and viewing. Elk numbers would be managed at levels that would restore and foster the long-term health of native plant communities.

We would collaborate with other agencies for public access, law enforcement, and management of elk. Similar to alternative B, habitats for native species, listed species, and other species of concern would be improved, but we would emphasize public education in our restoration efforts.

Similar to alternatives B and C, the existing arrangement with The Nature Conservancy for bison management on former State lands at the Baca National Wildlife Refuge would be phased out. We would introduce and manage a small bison herd on a confined area of the Baca National Wildlife Refuge. Wildlife viewing and interpretation opportunities would be emphasized and incorporated into this program.

Similar to all the other alternatives, invasive and noxious weeds would be controlled using chemical, mechanical, or manual methods or through the use of livestock grazing. Under this alternative, however, public education and awareness of the effects that invasive weeds have on native plant communities would be a key message for interpretation.

As under all alternatives, prescribed fire would be used. There would be a concerted effort to talk with the public about the role of fire on the landscape and garner support for strengthening the fire program. Similar to alternative B, we would pursue more funding for the protection of human safety following local, State, and national guidelines and strategies, but would limit having to maintain facilities that could increase the Service's legal obligations on and off the site.

Water Resources

We would manage water in a manner similar to alternative B except that more effort would be given to making sure there is water in specific areas or at specific times to enhance wildlife viewing. The spatial distribution of water would be managed to make the visitor's experience richer. A high priority would be placed on maintaining operation of wells that provide important wildlife viewing habitat. All of our wells would be augmented and would comply with Colorado water law. More water could also improve wildlife viewing opportunities. Ground water and surface water could be used to enhance areas used by sandhill cranes or provide more opportunities to see wildlife rather than merely providing for the life cycle needs of species less important to public uses. Similarly, we would improve infrastructure in areas that are highly valued by visitors to better facilitate wildlife observation. Water quality monitoring would be increased, and collaboration with a citizen scientist group or with schools or universities would be sought out.

Visitor Services

Alternative D would provide for the widest variety of compatible wildlife-dependent recreation. We would encourage and provide for big game and limited small game hunting on the Baca National Wildlife Refuge, with public dispersal hunts on the Monte Vista and Alamosa National Wildlife Refuges and limited small game hunting opportunities for all, including youth hunts and considerations for accessibility. Similar to alternative B, access would be expanded for all refuges, including opening the Baca National Wildlife Refuge for public uses. More trails, viewing blinds, restrooms, parking areas, and access points would be constructed.

Although our responsibilities for habitat and wildlife management come first, we would also consider and emphasize visitor experience when designing or locating visitor access or using existing infrastructure. With more staff and volunteers to support a wider range of compatible programs and facilities, we would increase interpretation and educational oppor-

tunities. Limited fishing access would be allowed on the Alamosa National Wildlife Refuge. Commercial uses, such as photography or art groups, would be considered. Public education and interpretation would highlight how visitor behavior can be modified to reduce wildlife disturbance.

Cultural Resources

Actions would be similar to alternative B, except there would be a greater emphasis on using students or volunteers to survey areas with high potential for cultural resources.

Partnerships and Refuge Complex Operations

Actions would be similar to alternative B, except we would pursue more partnerships and funding for priority public uses as well as securing resources to protect, enhance, and interpret significant cultural resources.

Research, Science, and Wilderness Review

Similar to alternative B, we would increase efforts to study habitats and wildlife, particularly with respect to understanding the effects of climate change and its effects on the resources of the San Luis Valley. How climate change affects the resources on the refuge complex would be incorporated into public use themes and messages.

Similar to alternatives B and C, we would recommend that wilderness values on the Baca National Wildlife Refuge be protected.

Rationale for Not Selecting Alternative D

Alternative D was not selected for implementation. Alternative D would partially meet our goals for habitat and wildlife management. Similar to alternatives B and C, we would prioritize restoration of the creek corridors on the Baca National Wildlife Refuge; however on Alamosa National Wildlife Refuge, it would be more difficult to achieve our riparian objectives given that the overall water management strategy would not change to any significant degree. This alternative would require the most investment in providing for visitor services, and fewer resources could be used for habitat improvements.

Some stakeholder agencies, or organizations, and members of the public expressed support for some elements of alternative D, but overall it was not widely supported by agencies, organizations, or the

public. Many organizations and stakeholders felt it went too far in providing for economic uses, in spite of the fact that all public and economic uses are subject to compatibility requirements.

Tribal Involvement and Consultation

The Service sent letters of notification about the planning process including an invitation to participate on the planning team to the following tribes:

- Jicarilla Apache Nation, Dulce, NM
- Navajo Nation, Window Rock, AZ
- Pueblo of Acoma, Acoma, NM
- Pueblo of Cochiti, Cochiti, NM
- Pueblo of Jemez, Jemez Pueblo, NM
- Pueblo of Laguna, Laguna, NM
- Pueblo of Picuris, Penasco, NM
- Pueblo of San Ildefonso, Santa Fe, NM
- Pueblo of Santa Clara, Española, NM
- Pueblo of Taos, Taos, NM
- Southern Ute Tribe, Ignacio, CO
- Uintah and Ouray Ute Indian Tribe, Fort Duchesne, UT
- Ute Mountain Ute Tribe, Towaoc, CO

We have continued to discuss key aspects of the CCP with interested tribes who have been actively involved in several cultural resources issues in the San Luis Valley.

Public Involvement and Outreach

A notice of intent to develop a CCP and a request for comments was published in the Federal Register on March 15, 2011 (FR 76 (50): 14042-44). The notice of intent notified the public of our intent to begin the CCP and EIS process.

Comments on the Draft CCP and EIS

The draft CCP and EIS was released to the public for a 60-day public review and comment period on August 26, 2014, following publication of a notice of availability in the Federal Register (FR 79 (165): 50937-39). We allowed comments to be submitted until November 3, 2014. We received over 1,000 comments on the draft CCP and EIS, including letters

from several tribes, our cooperating agencies, other governmental agencies, other conservation organizations, form letters (petitions), and individual comments. We responded to all the substantive comments we received in Appendix G of the Final CCP and EIS.

Comments on the Final Plan and EIS

The final CCP and EIS was published in the Federal Register on August 12, 2015 (FR 80 (155): 48328-31), and the 30-day waiting period ended on September 23, 2015.

No comments were received on the final CCP and EIS.

Environmentally Preferable Alternative

The environmentally preferable alternative is defined as the “alternative that will promote the national environmental policy as expressed in NEPA’s Section 101. Typically, this means the alternative that causes the least damage to the biological and physical environment. It also means the alternative that best protects, preserves and enhances historic, cultural and natural resources” (Forty Most Asked Questions Concerning Council of Environmental Quality’s National Environmental Policy Act Regulations, 1981).

We believe alternative B—Wildlife Populations, Strategic Habitat Restoration, and Enhanced Public Uses, is the environmentally preferable alternative. We believe alternative B balances the need to manage our water resources more efficiently and to take greater advantage of natural hydrological and ecological functions; it would also enable us to achieve a variety of wetland conditions to support a diversity of migratory birds and other wildlife. This is a key difference between whether alternative B or C is the environmentally preferred alternative.

Under alternative C, wetland management objectives would be similar to those under alternatives B and D, except that we would provide water only to natural wetland areas and historic flowpaths and would do so during times and at depths which mimic the natural hydrology. Under alternative C, we would take all feasible actions to restore or mimic the native vegetation and ecological conditions that existed before Euro-American settlement.

Alternative B tailors wetland and vegetative management to be more responsive to current and future hydrological conditions because less surface water will be available to support wetland habitats in the future. Alternative B is environmentally preferable because it makes more efficient and effective use of scarce water resources in maintaining native habitats while allowing for the restoration of former wetland areas to native upland conditions.

Under alternative C, removing levees and allowing created wetland areas to revert back to native upland vegetation would result in substantially fewer acres of wetland habitat and would reduce the overall level of wetland resources available for wildlife. However, these effects may be offset by the creation in habitat for upland wildlife species, a reduction in invasive weed infestations, and the greater availability of water to support and manage natural wetland areas.

Under alternative C, with a reduction in the number of roost areas on the Monte Vista National Wildlife Refuge (two out of three), the same number of cranes would have to fit into a smaller area, which could raise the potential risk for disease outbreaks. It is not clear whether eliminating grain production on the refuge would reduce the overall body condition of cranes during their spring and fall migration. Under alternative B, we would initiate a research project designed in part to better understand the energetic demands of sandhill cranes migrating through the San Luis Valley and how trends and changes in agricultural practices in the San Luis Valley could affect sandhill cranes in the long term. We think this strategy is preferable to alternative C.

Under alternative C on the Baca Refuge, changing to a more natural hydrologic condition that would keep more water in the creek channels would reduce the water availability for wet meadow habitat and reduce the overall extent of that habitat type.

There are some nuanced differences in protecting cultural and historic resources between alternatives B and C and in implementing big game hunting on all three refuges and opening Baca Refuge to limited small game hunting. Under alternative B, using public hunting as a management tool, in addition to providing for quality wildlife-dependent recreation (which has deep cultural roots in the San Luis Valley) also gives us greater flexibility to effectively manage elk to meet our habitat objectives by keeping elk more evenly distributed between refuge lands and other surrounding lands.

Under alternative B (and D), known sites and sensitive areas would get more law enforcement protection and education (staffing resources). Under alternative C, because natural processes and restoration would be emphasized, more non-significant structures and buildings could be removed.

Bison conservation continues to be an important issue for us, the Department of Interior, and many stakeholder groups. We believe the approach taken under alternative B to carefully research the potential for bison occurrence on Baca National Wildlife Refuge is environmentally preferable. This will ensure that their occurrence does not have an adverse impact on the habitats for other species.

In consideration of our mission and policies and the past history of the three national wildlife refuges, we believe that striking a balance between managing for a diversity of wildlife while restoring the ecological function of the wildlife habitats found across the refuge complex is the environmentally preferable alternative.

Measures to Minimize Environmental Harm

Throughout the planning process, we took into account all practicable measures to avoid or minimize environmental impacts that could result from the implementation of alternative B. These measures include the following:

- Continue maintaining solar power production and recycling efforts; increase energy efficiency; and adopt other ways to reduce the refuge complex's carbon footprint.
- Collaborate with the Colorado State Division of Water Resources, the Rio Grande Water Conservation District, and other partners to monitor river flows and ground water levels throughout the Upper Rio Grande watershed.
- Collect information on the timing, volume, and duration of surface water delivery to each refuge.
- Minimize emissions and particulates by following the best management practices when using motorized equipment and conducting restoration activities.
- Prescribed fire will be carried out under an approved fire plan and stringent smoke management plans. Reducing mortality, particularly during breeding seasons, will be considered in the application and timing of prescribed fire.
- Use careful planning in locating and building visitor facilities or road improvements to minimize disturbances, particularly during critical breeding periods. Controlling the numbers of ungulates, use of fencing (including wildlife-friendly fencing), and management of water structures are measures that will be incorporated into the plan.
- Use the best management practices during construction activities, restoring flowpaths, excavation of cultural resources, and the development of visitor services structures or facilities. Limit soil disturbance during dry or windy periods, using erosion controls, properly maintaining roads and culverts, keeping livestock out of riparian areas, and using the minimal tools necessary to accomplish the objective.
- Design all new facilities, including buildings, roads, and trails to limit their visual impact on the landscape. New facilities built on the Baca Refuge should reduce light pollution through the use of motion-activated lighting or should be directed away from or shielded from the Baca Grande subdivision, in keeping with the subdivision's policies for lighting. Any new use of alternative energy structures (windmills or solar panels) will be carefully sited to limit any visual impacts.
- Where possible, use the following principles to minimize the impacts of all roads in refuge complex:
 - locate roads away from streams and riparian areas;
 - locate roads away from steep slopes, landslide prone areas, and erosive soils;
 - when road stream crossings are unavoidable, construct roads during periods of low flow to avoid fish spawning and incubation periods, and dewater relevant stream segments prior to construction;
 - provide adequate drainage and control of erosion to avoid routing sediment into streams;
 - use bottomless or textured bottom culverts; and

- design roads around natural drainage patterns.
- Minimize human disturbance from habitat management activities and visitor services during the nesting season to limit impacts to biological resources. This could include several measures ranging from increased visitor education, monitoring, law enforcement, seasonal closures, and re-routing trails if needed.
- Review any mitigation requirements for any unavoidable adverse effects on historic properties resulting from our actions to ensure compliance with Section 106 of the National Historic Preservation Act. This process will be guided by the Service's cultural resources staff and will be done in consultation with the State Historic Preservation Office, the tribes, and other consulting parties.
- Obtaining all required permits.

Consultation Requirements: Section 7 of the Endangered Species Act

Several species in the San Luis Valley are listed as threatened or endangered species under the Endangered Species Act. These species were documented through an Intra-Service Section 7 Consultation. The only known threatened or endangered species found on the refuge complex (Alamosa Refuge) is the southwestern willow flycatcher (*Empidonax traillii extimus*).

New Mexico meadow jumping mouse (*Zapus hudsonius*) is an endangered species whose presence in the project area is unknown. The refuge complex is not in designated critical habitat for this species, but there are no known surveys that have been conducted in the project area.

There are several endangered or threatened species that are found in the San Luis Valley but not within the action area. A very small population of Gunnison sage grouse (*Centrocercus minimus*), which is federally listed as threatened, may occur near Poncha Pass, but the area was not designated as critical habitat and none are known to occur on the three refuges. Canada lynx (*Lynx canadensis*) (federally listed as threatened) is found at higher elevations in the San Luis Valley but not on the three refuges. Western-billed cuckoo (*Coccyzus america-*

nus) (federally listed as threatened) has been documented in dense, old-growth cottonwood habitats near McIntire Springs (in BLM area to the south) but this type of habitat is very limited on Alamosa Refuge, and the species has never been observed on the three refuges. Mexican spotted owl (*Strix occidentalis lucida*) has not been observed on the refuges, and since there are no mature montane forests, woodlands, shady-wooded canyons, or steep canyons, it is unlikely to occur. Currently, there are no species that are proposed for or candidates for listing found on the three refuges.

Through the intra-Service consultation process, we concluded that our preferred alternative (B) may affect but is not likely to adversely affect any protected species.

Section 106 of the National Historic Preservation Act

Activities outlined in alternative B have the potential to negatively affect cultural resources, either by direct disturbance during construction of habitat projects and facilities related to public use or administration and operations, or indirectly by exposing cultural and historic artifacts during management actions such as habitat restoration or prescribed burning. Prior to any undertaking that would be subject to Section 106 of the National Historic Preservation Act, activities that could negatively affect cultural resources will be identified, and options for minimizing negative effects will be discussed prior to implementation of the preferred alternative, including entering into consultation with the State Historic Preservation Officer and other parties as appropriate. We will protect all known burial sites.

Protection of Wetlands and Riparian Areas

Activities outlined in alternative B are aimed at restoring several riparian areas on Baca National Wildlife Refuge and selected backchannel areas on Alamosa National Wildlife Refuge. We will continue to provide water to both created and natural wetlands on Monte Vista and Alamosa Refuges. Although our water management would attempt to follow natural hydrologic cycles, we will have the flexibility to apply water in times or locations that are not natural, such as late summer and fall, to sup-

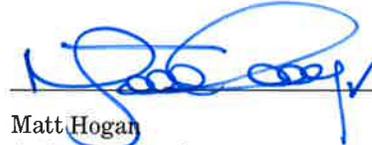
port fall migration or waterfowl hunting. However, some created wetlands will no longer be irrigated, and this water will instead be provided to natural flowpaths and riparian areas.

These strategies are expected to help preserve the long-term function and productivity of wetland habitat and to promote wetland communities that are ecologically resilient to climatic and hydrologic changes. With the more dynamic use of water in combination with using disturbance events such as big game hunting, prescribed fire, grazing, and haying, we want to create a diverse set of habitat conditions that will help wetland-dependent wildlife, especially waterfowl, wading birds, shorebirds, and songbirds.

On the Baca Refuge, one of the creek systems will no longer be used to irrigate wet meadow habitat because the water would be kept instream and provided to playa habitat when possible (every 1–3 years). While this is expected to result in short-term effects on these wet meadow areas, the re-establishment of a natural hydrologic cycle could increase the vegetative diversity and improve overall wetland health and function in these wet meadows, which would result in a long-term benefit. In addition, the shallowly inundated portions of wet meadows are expected to have a wider distribution in the upper portions of the meadows than the lower portions, which will result in a moderate to major effect on the vegetation composition in the downstream sections of wet meadow that will no longer be flood irrigated. These downstream portions of wet meadow are expected to convert from short-emergent wetland to grassland.

We will incorporate applicable regulatory compliance such as wetlands permitting into any dike or wetland removal efforts.

decision. Based on the above information, we have selected alternative B for implementation.



Matt Hogan
Acting Regional Director, Region 6
U.S. Fish and Wildlife Service

10.21.15

Date

Finding and Basis for Decision

We have considered the environmental and relevant concerns presented by agencies, tribes, organizations, and individuals on the proposed action to develop and implement a comprehensive conservation plan for the refuge complex.

Alternative B was selected for implementation because it achieves a reasonable balance between the significant resource management issues, the purposes of the refuges, the mission of the Refuge System, and the interests and perspectives of all stakeholders.

All public, tribal, and agency comments received during the environmental process were reviewed. The issues and comments raised were addressed in the final CCP and EIS. Comments and responses on the final CCP and EIS are addressed in this record of