Chapter 1—Introduction

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Early morning light on Monte Vista National Wildlife Refuge.

We, the U.S. Fish and Wildlife Service (Service), have developed this final comprehensive conservation plan (CCP) for the management and use of three national wildlife refuges within San Luis Valley National Wildlife Refuge Complex (refuge complex, the refuges). The refuge complex is made up of four units of the National Wildlife Refuge System (Refuge System): Monte Vista National Wildlife Refuge, Alamosa National Wildlife Refuge, Baca National Wildlife Refuge and the Sangre de Cristo Conservation Area. These units are located in Alamosa, Saguache, Rio Grande, and Costilla counties in Colorado and Taos county in New Mexico (see vicinity map, figure 2). Although the Sangre de Cristo Conservation Area is part of the refuge complex, the priorities for land protection and conservation are identified in a separate land protection plan (FWS 2012) and are not included in this CCP. The proposed San Luis Valley Conservation Area will be established upon acquisition of the first easement of a parcel of land. It will then become the fifth unit of the refuge complex. The land protection plan for the proposed conservation area was approved.

The CCP was developed in compliance with the National Wildlife Refuge Administration Act of 1966, as amended (16 U.S.C. 668dd et seq.), also known as the Improvement Act, and Part 602 (National Wildlife Refuge System Planning) of the "Fish and Wildlife Service Manual" (FWS 2000c) and other Service guidelines. The actions described in the CCP also meet the requirements of the National Environmental Policy Act of 1969 (NEPA; refer to appendixes A and B). Wildlife conservation, including habitat conservation, is our first priority for managing national wildlife refuges. Public uses, specifically wildlife-dependent recreational uses, are allowed and encouraged as long as they are compatible with the establishment purposes of each refuge.

This CCP for the refuge complex discusses program levels that are sometimes substantially above current budget allocations and, as such, are primarily for strategic planning purposes. The CCP specifies the actions that are necessary to achieve the vision

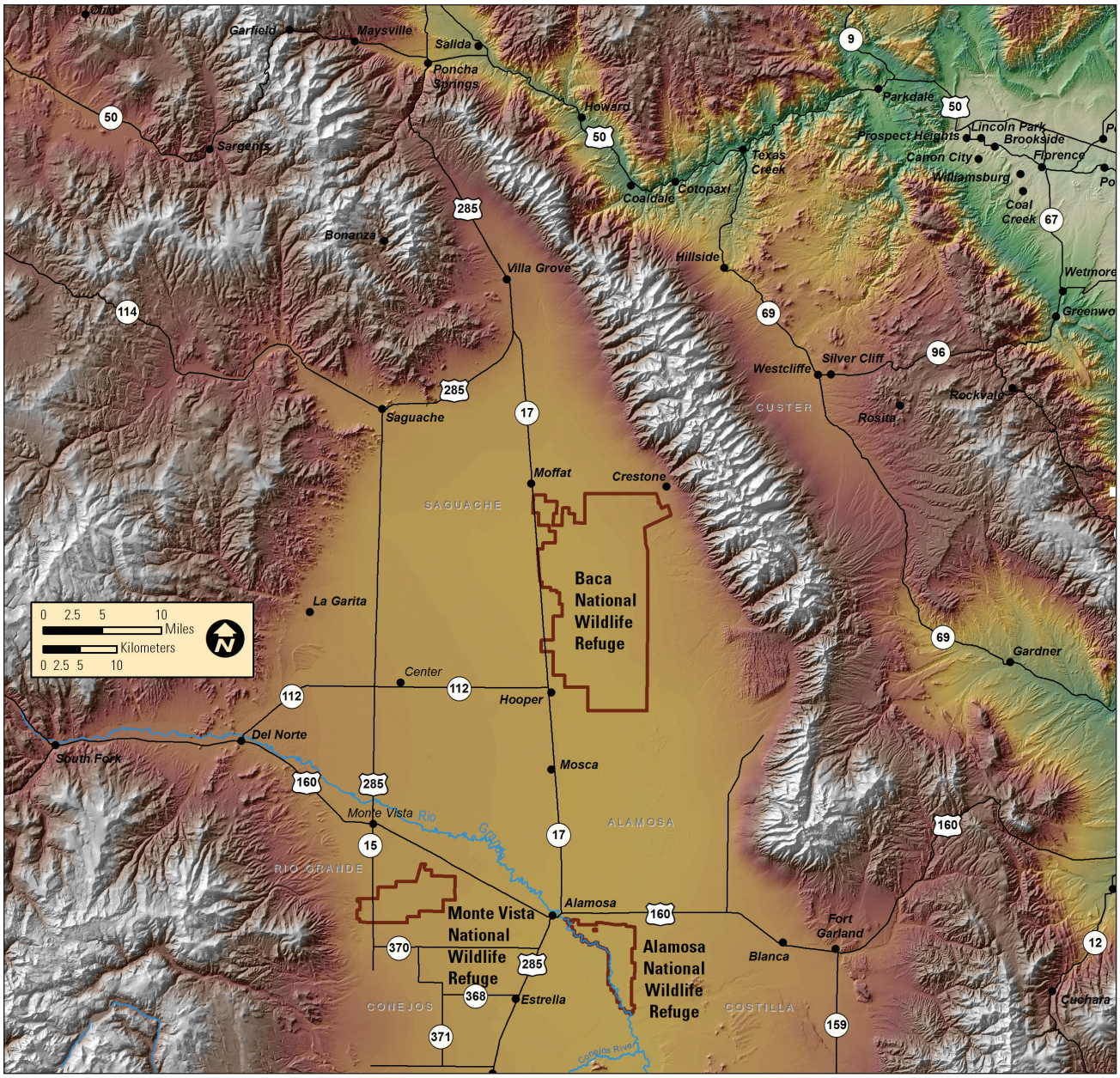

Figure 2. Vicinity map of the San Luis Valley National Wildlife Refuge Complex, Colorado.

and goals of the refuge complex, and it will guide the management activities, programs, and actions for the 15 years following approval.

We developed the plan through both extensive public input and collaboration with several Federal, State, and local agencies that have close ties to the refuges (appendix C). The following cooperating agencies were on the planning team:

- Bureau of Land Management (BLM) (San Luis Valley Public Lands Center)
- Bureau of Reclamation (BOR)
- USDA Forest Service (Forest Service) (San Luis Valley Public Lands Center)
- National Park Service (NPS)
- Natural Resources Conservation Service (NRCS)
- Colorado Parks and Wildlife (CPW) (formerly Colorado Division of Wildlife)
- Colorado Water Resources Division

Public involvement in the planning process is discussed in section 1.6 below and in further detail in appendix D.

1.1 Purpose and Need for Action

The purpose of this CCP 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 management of refuge programs and activities. The CCP is needed to help us achieve the following:

- communicate with the public and other partners about our efforts to carry out the mission of the Refuge System and meet the purposes of the refuges;
- 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 despite current challenges such as drought, water shortages, and the effects of climate change;
- provide neighbors, visitors, and government officials with an understanding of our management actions on and around the refuge complex;
- ensure that our management actions are consistent with the mandates of the Improvement Act;
- ensure that management of the refuge complex considers other Federal, State, and local government plans; and
- provide a basis for development of budget requests for the operation, maintenance, and capital improvement needs of the refuge complex.

We are committed to sustaining the Nation's fish and wildlife resources through the combined efforts of governments, businesses, and private citizens.

1.2 U.S. Fish and Wildlife Service and Refuge System

We are the principal Federal agency responsible for fish, wildlife, and plant conservation. The Refuge System is one of our major programs.

U.S. Fish and Wildlife Service

The Service was established in the Department of the Interior (DOI) in 1940 through the consolidation of bureaus then operating in several Federal departments. The primary precursor agency was the Bureau of Biological Survey in the U.S. Department of Agriculture (USDA). Today, we enforce Federal wildlife laws, manage migratory bird populations, restore nationally significant fisheries, conserve and restore vital wildlife habitat, protect and recover endangered species, and help other agencies and governments with conservation efforts. In addition, we administer a Federal aid program that distributes hundreds of millions of dollars to States for fish and wildlife restoration, boating access, hunter education, and related programs.

Our mission is working with others to conserve, protect, and enhance fish, wildlife, and plants and their habitats for the continuing benefit of the American people.

Service Activities in Colorado

Our activities in Colorado contribute to the State's economy, ecosystems, and education programs. The following list describes some of our activities:

- We manage nine units of the Refuge System plus other acreage along the Colorado River for a total area of 339,760 acres (FWS 2013a). We also manage two fish hatcheries with a total area of 3,208 acres, two coordination areas with a total area of 1,153 acres, and one administrative site (FWS 2013a).
- We provide millions of dollars annually to Colorado Parks and Wildlife for sport fish and wildlife restoration and hunter education under the Pittman-Robertson Act of

1937 and the Dingell-Johnson Act of 1950 (FWS 2013m).

- For more than 20 years, our Partners for Fish and Wildlife Program (Partners program) has helped to restore more than 29,647 wetland acres, 296 linear miles of streams, and 104,910 upland acres in Colorado (FWS 2013k).

- In 2011, we paid Colorado counties $491,087 under the Refuge Revenue Sharing Act for use in schools and for roads (FWS 2013l).

National Wildlife Refuge System

In 1903, President Theodore Roosevelt designated the 5.5-acre Pelican Island in Florida as the Nation's first wildlife refuge to protect nesting colonies of brown pelicans, egrets, and other birds. This was the first time the Federal Government had set aside land specifically for wildlife. This small but significant designation was the beginning of the National Wildlife Refuge System.

Since then, the Refuge System has become the largest collection of lands in the world specifically managed for wildlife, with at least one refuge in every State and in five U.S. territories and Commonwealths. These units of the Refuge System vary widely in size, purpose, origin, climate, level of development and use, and degree of Federal ownership (Fischman 2005, FWS 2013i).

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.

Historically, most refuge-establishing statutes that authorized acquisition of national wildlife refuge lands gave broad authority to the Service for managing lands for wildlife. However, in many cases the establishing authorities lacked specific direction or procedures for uniform management of the acquired and reserved lands. To resolve this, Congress passed two statutes in the 1960s to provide administrative guidance: the Refuge Recreation Act of 1962 and the National Wildlife Refuge System Administration Act of 1966 (Administration Act). (Refer to appendix B.) While the Administration Act consolidated the units under our jurisdiction, it still did not meet its goal of giving clear direction for Refuge System management. The Administration Act gave the Secretary of the Interior broad power to decide what secondary uses could occur on national wildlife refuges, but it did not provide any biological standards or other standards of review outside of the establishing purposes. Furthermore, Congress did not specify a definition for compatible uses or provide any other direction on making such a determination (Tredennick 2000).

In the late 1980s, a decline in migratory bird populations prompted a General Accounting Office study of how refuge management activities negatively affected these populations (General Accounting Office 1989, U.S. House of Representatives 1997). The report concluded that the focus on secondary uses of refuges diverted refuge managers' attention and resources away from wildlife management. In the early 1990s, several environmental organizations sought to end some recreational and economic uses of refuges because of alleged incompatibility with wildlife conservation, and these organizations challenged the Service through several lawsuits (Tredennick 2000). Eventually, the Service settled the lawsuits by changing or eliminating several existing uses of refuge lands. The pressure for new legislation intensified as a direct result of these lawsuits and other concerns, and the ground was laid for passage of a

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The American avocet is one of many shorebirds that migrate through the San Luis Valley National Wildlife Refuge Complex.

bill that would give us a clear mission and help resolve the problems of the past (U.S. House of Representatives 1997). Finally, on October 9, 1997, Congress passed into law the National Wildlife Refuge System Improvement Act of 1997 (Improvement Act). The Improvement Act established a clear vision for the Refuge System.

The Improvement Act (and associated regulations) states that each national wildlife refuge must be managed to:

- "fulfill the mission of the System, as well as the specific purposes for which that refuge was established";
- consider "wildlife conservation… [as] the singular National Wildlife Refuge System mission" (Final Compatibility Regulations Pursuant to the National Wildlife Refuge System Improvement Act of 1997; FWS 2000a);
- "ensure that the biological integrity, diversity, and environmental health of the System are maintained";
- fulfill the requirements of preparing "a comprehensive conservation plan… for each refuge within 15 years after the date of enactment of the… Act" and of ensuring opportunities for "public involvement in the preparation and revision of [these] plans";
- recognize that "compatible wildlife-dependent recreation [hunting, fishing, wildlife observation and photography, and environmental education and interpretation] is a legitimate and appropriate general public use of the System"; and
- keep the authority of a refuge manager to "make… the compatibility determination" after exercising "sound professional judgment… regarding wildlife conservation and uses of the National Wildlife Refuge System" (Final Compatibility Regulations Pursuant to the National Wildlife Refuge System Improvement Act of 1997; FWS 2000a).

We started following the direction of the new legislation immediately after the passage of the Improvement Act, including the preparation of CCPs for all national wildlife refuges and wetland management districts. Following the mandates of the Improvement Act, we encourage public involvement in the preparation of all CCPs.

People and the Refuge System

The Nation's fish and wildlife heritage contributes to the quality of American lives and is an integral part of the country's greatness. Wildlife and wild places have always given people special opportunities to have fun, relax, and appreciate the natural world.

Wildlife-dependent recreation contributes millions of dollars to local economies, whether through birding, fishing, hunting, photography, or other wildlife-related pursuits. Nearly 46.5 million people visited national wildlife refuges in 2011 (Carver and Caudill 2013), mostly to observe wild animals in their natural habitats. Refuge visitors enjoy nature trails, auto tours, interpretive programs, and hunting and fishing opportunities. Local communities that surround the refuges and districts receive significant economic benefits. Economists report that Refuge System visitors contribute more than $2.4 billion annually to local economies, and 72 percent of this money is generated by non-consumptive activities (Carver and Caudill 2013).

Compatible Refuge Uses

Lands within the Refuge System are different from other Federal lands that have multiple-use purposes in that Refuge System lands are closed to the public upon acquisition unless specifically and legally opened. A refuge use is not allowed unless the Service finds the use to be compatible (FWS 2000a). We cannot allow a new use of a refuge or expand, renew, or extend an existing use of a refuge unless the Secretary has decided that the use is a compatible one and is consistent with public safety. A compatible use is one that, in the sound professional judgment of the refuge manager, will not materially interfere with or detract from the fulfillment of the Refuge System mission or the purposes of the refuge. "Sound professional judgment" is defined as a decision that is consistent with the principles of fish and wildlife management and administration, the available science and resources, and adherence to the law.

Compatibility determinations for existing and new uses for the refuge complex are found in appendix E. A compatibility determination is the written documentation that an existing or proposed use of a national wildlife refuge either is or is not compatible with the purposes of the refuge. Following public review, a final determination is made about the compatibility of various uses. Subsequently, the determination is signed and dated by the refuge manager with the concurrence of the assistant regional director for the Refuge System. Compatibility determinations are typically completed as part of the process for a CCP or stepdown management plan. Once a

final compatibility determination is made, it is not subject to administrative appeal.

The Improvement Act states that six priority uses—hunting, fishing, wildlife observation, photography, interpretation, and environmental education—should receive consideration in planning and management over other public uses. All other uses, including livestock grazing and commercial recreation, require compatibility determinations. However, refuge management activities such as prescribed fire or invasive plant control do not require compatibility determinations.

Biological Integrity, Diversity, and Environmental Health

Central to the Improvement Act is the requirement that the biological integrity, diversity, and environmental health of the Refuge System be kept for the benefit of present and future generations of Americans. In 2001, we published a policy with guidance on this topic (FWS 2001). This policy presents a directive for refuge managers to follow while achieving the purposes of the refuge and the Refuge System mission. The refuge manager is to consider the broad spectrum of fish, wildlife, and habitat resources found on the refuge and associated ecosystems. The policy defines the terms "biological integrity," "diversity," and "environmental health," and provides direction for secondary economic uses like farming, haying, logging, livestock grazing, and other extractive activities. These are permissible habitat management practices only when prescribed in plans to meet wildlife or habitat management objectives and only when more natural methods, such as fire or grazing by native herbivores, cannot meet refuge purposes and goals. As stated above, a compatibility determination is required for these uses.

1.3 National and Regional Mandates

Refuge System units are managed to achieve the mission and goals of the Refuge System, along with the designated purposes of the refuges, conservation areas, and wetland management districts as described in establishing legislation, Executive orders, or other establishing documents. Key concepts and guidance for the Refuge System are found in the National Wildlife Refuge System Administration Act of 1966, as amended by the Improvement Act (16 United States Code [U.S.C.] 668dd et seq.) and further detailed in Title 50 of the Code of Federal Regulations (CFR) and the "Fish and Wildlife Service Manual."

Brief descriptions of the laws and Executive orders that may affect the development or implemen-

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Wetland on Monte Vista Refuge.

tation of this CCP are in Appendix B. Service policy for the planning process and management of refuges and districts is found in the "Fish and Wildlife Service Manual."

Strategic Habitat Conservation

Escalating challenges such as land use conversion, invasive species, water scarcity, and climate change have led us to move away from our earlier approach to conservation, which emphasized ecosystems, toward a broader vision that emphasizes landscape conservation in partnership with others.

A cooperative effort by the Service and the U.S. Geological Survey (USGS) culminated in a report on strategic habitat conservation by the National Ecological Assessment Team (USGS and FWS 2006). This report outlined a unifying and adaptive resource management approach for landscape-scale conservation of a priority species or suite of species. This is strategic habitat conservation—a way of thinking and doing business by incorporating biological goals for priority species populations, by making strategic decisions about the work needed, and by constantly reassessing and refining our approach (figure 3).

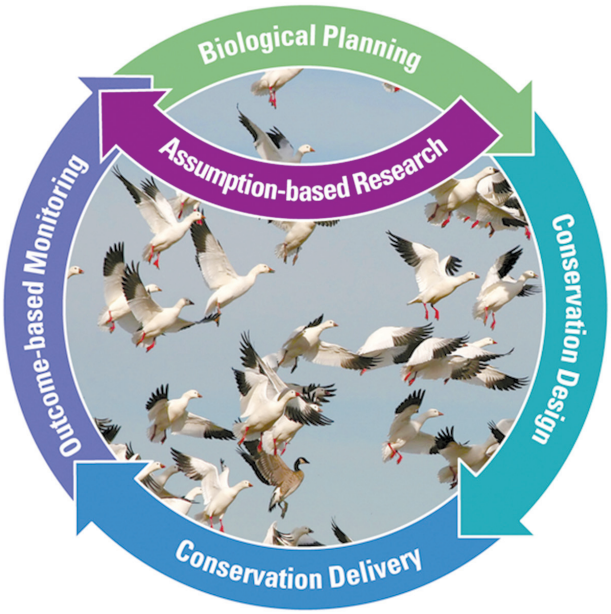

Figure 3. Basic strategic habitat conservation process.

Since 2006, we have taken significant steps to turn this vision into a reality, and we have defined a framework of 22 geographic areas. The Service and the USGS developed this framework through an aggregation of bird conservation regions (figure 4). The refuge complex lies within the Southern Rockies Geographic Area (figure 5).

We have used this framework as the basis to establish the first generation of landscape conservation cooperatives. These cooperatives are conservation–science partnerships between the Service and other Federal agencies, States, tribes, nongovernmental organizations, universities, and others. Designed as fundamental units for planning and science, the cooperatives have the capacity to help us carry out the elements of strategic habitat conservation: biological planning, conservation design and delivery, and monitoring and research. Coordinated planning and scientific information will strengthen our strategic response to accelerating climate change and other challenges. Because the sheer number of species that we and our partners work with makes designing and conserving landscape-scale habitats impractical on a species-by-species basis, we are now developing a process to collaboratively identify surrogate species, or species that can represent a suite of other species or aspects of the environment such as habitat or water quality. For more information about surrogate or focal species, refer to chapters 3 and 4.

Climate Change

We expect that accelerating climate change will affect the Nation's fish, wildlife, and plant resources in profound ways. While many species will continue to thrive, some may decline and some may become extinct. Some species will survive in the wild only through direct and continuous intervention by managers. In 2010, we completed a strategic plan to address climate change for the next 50 years. The strategic plan employs three key strategies: adaptation, mitigation, and engagement. In addition, the plan acknowledges that no single organization or agency can address climate change without allying itself with others in partnerships across the Nation and around the world (FWS 2010). This strategic plan is an integral part of DOI's strategy for addressing climate change, as expressed in Secretarial Order 3226 and updated by Order 3289 (DOI 2009). Order 3226 states "there is a consensus in the international community that global climate change is occurring and that it should be addressed in governmental decisionmaking" (see chapter 3, section 3.1). Furthermore, we are employing the national fish, wildlife, and plants climate adaptation strategy (National Fish, Wildlife, and Plants Climate Adaptation Partnership 2012), which is a call to action to work with other natural resource professionals and decisionmakers to conserve the nation's fish, wildlife, plants, and natural systems in a changing climate.

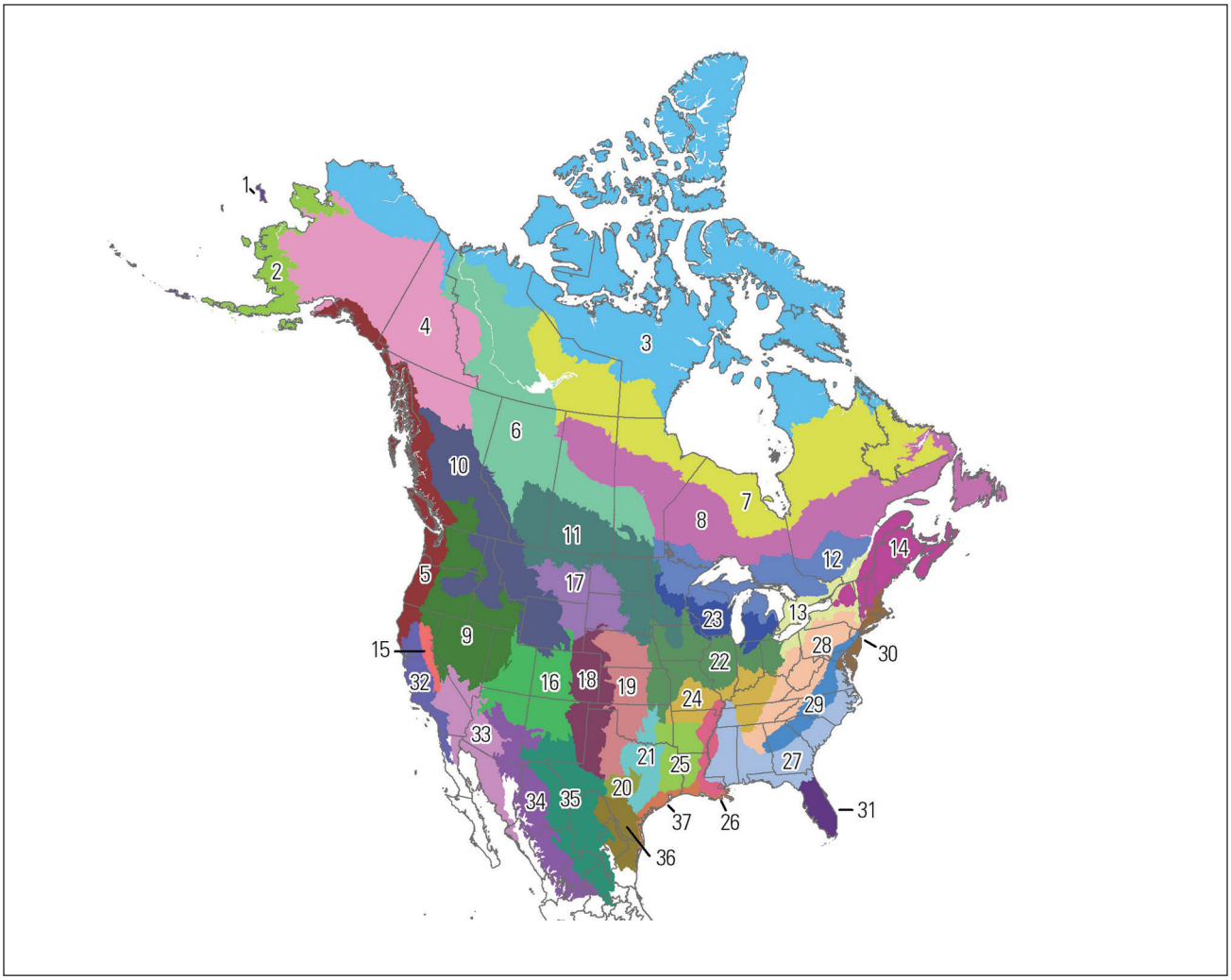

Figure 4. Map of the bird conservation regions in North America.

We will use the following guiding principles from the strategic plan (FWS 2010) in responding to climate change:

- Priority setting—Continually evaluate priorities and approaches, make difficult choices, take calculated risks, and adapt to climate change.
- Partnership—Commit to a new spirit of coordination, collaboration, and interdependence with others.
- Best science—Reflect scientific excellence, professionalism, and integrity in all of our work.
- Landscape conservation—Emphasize the conservation of habitats within sustainable landscapes, applying our strategic habitat conservation framework.
- Technical capacity—Assemble and use state-of-the-art technical capacity to meet the climate change challenge.
- Global approach—Be a leader in national and international efforts to meet the climate change challenge.

Conserving the Future

In 1999, we developed a vision for the Refuge System. A report titled "Fulfilling the Promise—The National Wildlife Refuge System" (FWS 1999) was the culmination of a year-long process by teams of Service employees to evaluate the Refuge System nationwide. It was the focus of the first National Refuge System conference (in 1998), which was attended by refuge managers, other Service employees, and representatives from leading conservation organizations. The report contains 42 recommendations packaged with three vision statements dealing with

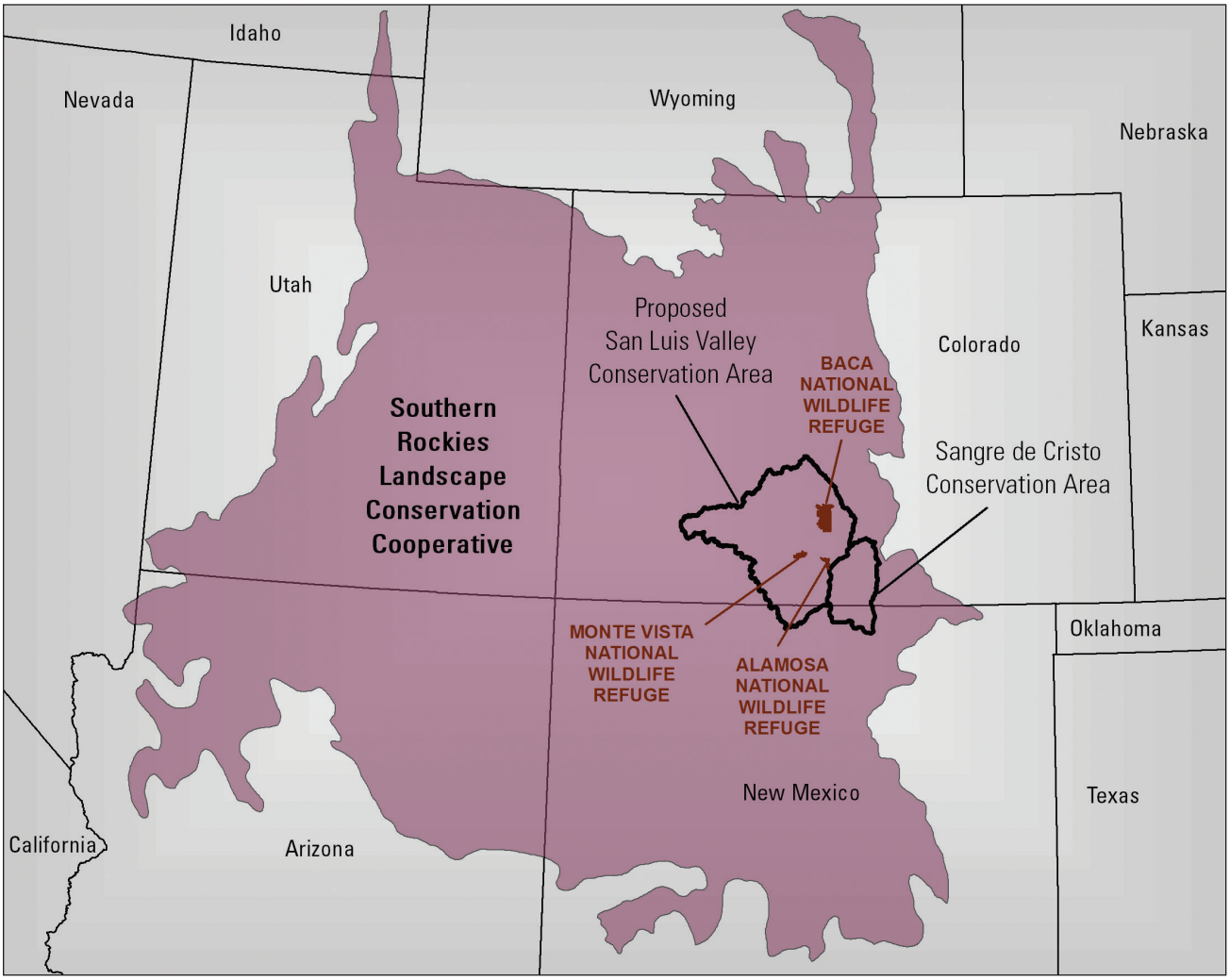

Figure 5. Map of the Southern Rockies Geographic Area.

wildlife and habitat, people, and leadership. The outcome of that effort continues to influence CCP planning both nationally and locally.

In 2010, we began updating our earlier vision for the Refuge System in a report titled "Conserving Our Future" to chart a course for the Refuge System's next 10 years (FWS 2011a). The new vision recognizes many new challenges in landscape conservation efforts, including a rapidly changing landscape and a tighter Federal budget. There is less undeveloped land, there are more invasive species, and we are experiencing the effects of a changing climate. In the face of these and other challenges, we believe that we can gain conservation strength through continued building of partnerships with Federal, State, and local agencies; tribes; nongovernmental organizations; Friends groups; and volunteers. As we have in the past, we strive to be a vital part of local communities as we work to conserve wildlife and habitats (FWS 2011a).

1.4 Other National Conservation Efforts

As part of our strategic habitat conservation mission, the refuge complex collaborates with the planning and conservation work of many regional and national agencies and organizations. Some of these projects are listed below.

Recovery Plans for Threatened and Endangered Species

Where federally listed threatened or endangered species occur within the refuge complex, we adhere to the management goals and strategies in the recovery plans. The list of threatened and endangered spe-

cies at the refuge complex changes as species are listed or delisted or as listed species are discovered on refuge lands. Currently, the refuge complex follows the recovery and management plans for southwestern willow flycatcher, which is listed as an endangered species. (Refer to the biological resources section in chapter 3 and habitat and wildlife objectives in chapter 4.) Other listed species or species of concern that could occur within the refuge complex are detailed in chapter 3, section 3.2.

Bird Conservation

Over the past few decades, there has been growing interest in conserving birds and their habitats. This has led to the development of partnership-based bird conservation initiatives that have produced international, national, and regional conservation plans. The North American Bird Conservation Initiative Committee was started in 1999. This coalition of government agencies, private organizations, and bird initiative groups in the United States, Canada, and Mexico is working to advance and integrate bird conservation efforts. The primary conservation planning initiatives follow the Partners in Flight North American Landbird Conservation Plan, the North American Waterfowl Management Plan, the U.S. Shorebird Conservation Plan, and the North American Waterbird Conservation Plan. The role of the refuge complex is described below for the Partners in Flight plan and the North American Waterfowl Management Plan.

Partners in Flight

The Partners in Flight program began in 1990 in response to the declining population levels of many migratory bird species. The program's primary goal is to provide for the long-term health of birdlife in the Western Hemisphere. Priorities include the following: (1) prevent the rarest species from going extinct, (2) prevent uncommon species from becoming threatened, and (3) "keep common birds common" (Partners in Flight 2010).

For planning purposes, Partners in Flight splits North America into 37 conservation regions (see figure 4). The refuge complex lies within Bird Conservation Region 16–Southern Rockies (North American Bird Conservation Initiative 2013). Region 16 is a topographically complex region that includes the southern Rocky Mountains. Wetlands in the San Luis Valley support one of the highest densities of nesting waterfowl in North America, and these wetlands and the surrounding uplands provide migration habitat for sandhill cranes and other species.

Focal birds are a subset of the list of the Service's 2009 Birds of Management Concern (FWS 2011e) and are chosen based on (1) high conservation need, (2) representative of a broader group of species sharing the same or similar conservation needs, (3) high level of current Service effort, (4) potential to stimulate partnerships, and (5) high likelihood that factors affecting status can realistically be addressed.

As discussed in chapters 3 and 4, some of the Bird Conservation Region 16 focal species are found on the refuge complex.

North American Waterfowl Management Plan

By the mid-1980s, waterfowl populations had plummeted to record lows. In the United States, the habitat that waterfowl depend on for survival was disappearing at a rate of 60 acres per hour, with similar wetland losses occurring across Canada (FWS 2013j).

Recognizing the importance of waterfowl and wetlands to North Americans and the need for international cooperation to help recover a shared resource, the United States and Canadian Governments developed the North American Waterfowl Management Plan to restore waterfowl populations through habitat protection, restoration, and enhancement. The plan was expanded to include Mexico in 1994. The plan is innovative not only because of its international scope but because of its implementation

FWS

Waterfowl hunting is a popular activity on Alamosa and Monte Vista Refuges during the fall.

at the regional level (DOI, SEMARNAP Mexico, Environment Canada 1998).

The success of the waterfowl management plan depends on the strength of partnerships called joint ventures, which involve Federal, State, provincial, tribal, and local governments; businesses; conservation organizations; and individual citizens. Joint ventures are regional, self-directed partnerships that carry out science-based conservation through community participation. Joint ventures develop implementation plans that focus on the areas of concern identified in the plan. The refuge complex is part of the Intermountain West Joint Venture (FWS 2013g).

State Comprehensive Fish and Wildlife Conservation Strategy

Over the past several decades, there have been many documented declines of wildlife populations across the Nation. To try to keep species from becoming threatened or endangered, Congress created the State Wildlife Grant program in 2001. This program provides States and territories with Federal money to support wildlife conservation.

Under this program, each State develops a Comprehensive Fish and Wildlife Conservation strategy that defines an integrated approach to the stewardship of all wildlife species, with emphasis on species of concern and habitats at risk. The goal is to shift focus from single-species management and highly specific individual efforts to a landscape-oriented, geographically based conservation effort. The Service approves each State's conservation strategy and administers the State Wildlife Grant money.

Colorado's highest priority watersheds include the Rio Grande headwaters basin and the Upper Rio Grande basin, where the three national wildlife refuges are located, as well as the Sangre de Cristo Conservation Area (FWS 2012b) and the proposed San Luis Valley Conservation Area (FWS 2012a). Tier 1 species (highest priority) include all federally listed species, along with 52 species of greatest conservation need, for 107 Tier 1 species. Tier 2 consists of the remaining 103 species of greatest conservation need. Tier 1 bird species relevant to the refuge complex include American bittern, Brewer's sparrow, long-billed curlew, the endangered southwestern willow flycatcher, and white-faced ibis. Fish include Rio Grande sucker, Rio Grande chub, and Rio Grande cutthroat trout.

The planning team for the CCP used Colorado's Comprehensive Fish and Wildlife Conservation Strategy during the development of the final CCP and EIS (CDOW 2006). Implementation of the CCP's habitat goals and objectives will support the goals and objectives of the State conservation strategy.

1.5 Planning Process

Planning for the refuge complex's CCP began in fall 2010 with the establishment of a core planning team of Service staff from the refuge complex and the Mountain-Prairie Region. Appendix C lists the planning team members, cooperating agency members, contributors, and consultants for this planning process.

The core team was responsible for the analysis, writing, and production of the final CCP and EIS. With the entire refuge staff, the core team developed a preliminary vision and set goals for the refuge. The cooperating agencies (refer to section 1.6) are part of the larger planning team, which met throughout the process to develop and review the alternatives and to review drafts of the CCP and EIS.

While developing the CCP, the planning team collected available information about the resources of the refuge and surrounding area. This information is summarized in chapter 3 and served as the baseline for analyzing the predicted effects of the alternatives. Table 1 lists many other planning activities that occurred.

The planning process is based on the Refuge System planning policy, which was issued in 2000 (FWS 2000c). The resulting requirements and guidance for refuge and district plans, including CCPs and step-down management plans, make sure that planning efforts comply with the Improvement Act. The planning policy sets out the steps of the CCP and environmental analysis process (figure 6).

1.6 Public Involvement

Public scoping began in March 2011 with the release of a public involvement summary and a planning update that described the CCP process and its anticipated schedule (FWS 2011h). We published a notice of intent to prepare a CCP and EIS in the Federal Register on March 15, 2011 (76 FR Doc. 2011-5924). Since then, we conducted nine public meetings during scoping, development of the alternatives, and public review of the draft CCP and EIS; mailed three planning updates; posted information on the Web page for the CCP; and coordinated with Federal, State, and local agencies and Native American tribes. We also held three meetings on a draft land protec-

tion plan and environmental assessment for the San Luis Valley Conservation Area (spring 2012). The proposed conservation area was modified by splitting it into two separate parts: the Sangre de Cristo Conservation Area (FWS 2012b), which conserves the alpine and mountain areas of the Sangre de Cristo Range, and the proposed San Luis Valley Conservation Area.

An important consideration in the development of this plan—including the vision, goals, objectives, and strategies—is the opinions, perspectives, and values of all interested citizens, agencies, and organized groups. While there are no requirements to base management decisions on public opinion, the Service values and considers input from the public. As detailed in appendix D, the Service has consulted with Native American tribes and has actively involved Federal and State agencies, local governments, organizations, and private citizens throughout the process.

Table 1. Planning process summary for the CCP and EIS for San Luis Valley Refuge Complex, Colorado.

Date	*Planning activity*	*Outcome*
August 2010	Initial site meeting	Met with refuge staff. Identification of the refuge purposes and initial list of issues and qualities. Development of the CCP overview.
November 29, 2010	Kickoff meeting and workshop for vision and goals	Updated the list of issues and qualities affecting the refuge complex. Identification of needed biological information and maps. Development of draft vision and goals.
December 9, 2010	Scoping	Notification and briefing about the CCP development to the State of Colorado, Native American tribes, agencies, county commissioners, and others.
January 21, 2011	Public involvement summary	Report of the planned public involvement process for use as a handout and posting to the CCP Web page.
February 1, 2011	Planning team kickoff	Initial meeting with refuge staff and the planning team.
March 15, 2011	Notice of intent in the *Federal Register*	Notice of intent to develop a CCP and EIS for the refuge complex and a request for comments published in the Federal Register (scoping comments accepted until April 29, 2011).
March 2011	Planning update 1	Announcement of dates, location, and format of public meetings and description of the draft vision and goals. Distribution to the mailing list and posting to the CCP Web page.
March 29-31, 2011	Public scoping meetings	Information presented about the CCP development with question and answer and comment session.
March 2011	Public scoping meetings	Briefings with six adjacent counties on CCP and LPP process.
June 2011	Scoping report	Documentation of public comments from the comment period and identification of significant issues. Posting to the CCP Web page.
August 2011	Planning team meeting for draft alternatives	Initial development of draft alternative concepts with refuge staff.
September 20-22, 2011	Planning team meeting for cooperating agencies and FWS staff	Refinement of draft alternative concepts.
January 2012	Planning update 2	Summary of four alternatives and schedule for the alternative workshops. Distribution to the mailing list and posting to the CCP Web page.
January 23-25, 2012	Public workshops for draft alternatives	Input about the draft alternatives from people in six communities.
June 19-21, 2012	Workshop for biological objectives and strategies	Development of biological objectives and strategies for each alternative.

Table 1. Planning process summary for the CCP and EIS for San Luis Valley Refuge Complex, Colorado.

Date	*Planning activity*	*Outcome*
November 13-15, 2012	Workshop for public use objectives and strategies	Development of public use objectives and strategies for each alternative.
2013	Internal draft CCP and EIS	Initial development of the draft CCP and EIS.
April 21-22, 2014	Internal review meeting	Internal review of draft CCP and EIS by planning team and cooperating agencies.
August 26, 2014	Publication of draft CCP and EIS, planning update 3	Public review and comment period began.
September 29, 30, October 1, 2014	Public meetings	Public meetings held on draft CCP and EIS.
April 2015	Internal review for Final CCP and EIS	Met with cooperating agencies for planning progress update.
August 2015	Publish Final CCP and EIS	Release of documents with final changes and responses to public comments.
October 2015	Regional Director signs record of decision	Start implementation of the CCP.

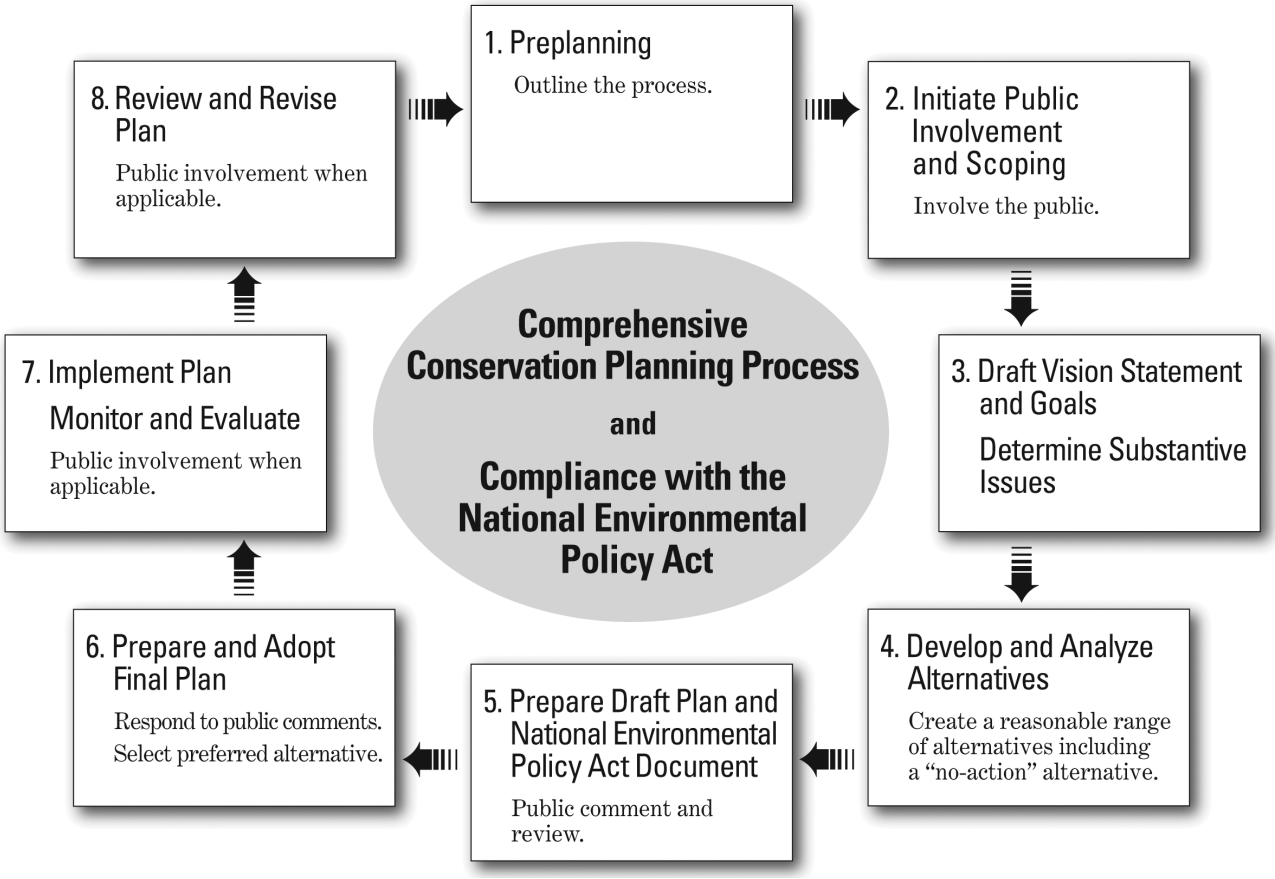

Figure 6. Steps in the comprehensive conservation planning process.

Cooperating Agencies

We sent letters of notification about the planning process, including an invitation to join the planning team, to several Federal and State agencies: Bureau of Land Management (BLM) and the USDA Forest Service (USFS) (both agencies are part of the San Juan Public Lands Center), Bureau of Reclamation (BOR), National Park Service (NPS), Natural Resources Conservation Service (NRCS), Colorado Parks and Wildlife (CPW), and the Colorado Division of Water Resources. These agencies all participated as cooperating agencies.

The Service also met and briefed the six counties (Alamosa, Rio Grande, Saguache, Conejos, Costilla, and Mineral) within the San Luis Valley about the planning process, including our current proposal for the San Luis Valley Conservation Area. Part of this original proposal was later split into two segments, one of which resulted in the establishment of the Sangre de Cristo Conservation Area in 2012. The three national wildlife refuges (Monte Vista, Alamosa, and Baca) lie within Alamosa, Rio Grande, and Saguache Counties.

Native American Tribes

The Service sent letters of notification about the planning process, including an invitation to join the planning team, to the following tribes: Cochiti Pueblo, Pueblo of Santa Clara, Pueblo of Laguna, Pueblo of Zuni, Pueblo of Picuris, Pueblo of San Ildefonso, Pueblo of Acoma, Pueblo of Santa Ana, Pueblo of Taos, Pueblo of Jemez, Uintah and Ouray Ute Indian Tribe, Southern Ute Tribe, Ute Mountain Tribe, Jicarilla Apache Nation, Ohkay Owingeh, and Navajo Nation. The Service is continuing to reach out to and work with tribes who are interested in the planning process.

FWS

The planning team included a variety of Federal and State team members who helped with developing the CCP and EIS.

1.7 Significant Issues to Address

Our scoping process for the CCP and EIS identified many qualities of the refuges along with issues and recommendations. Based on this information, as well as guidance from the Improvement Act, NEPA, and our planning policy, we identified seven significant issues to address:

- Habitat and wildlife management
- Water resources
- Landscape conservation and wilderness review
- Visitor services
- Partnerships and operations
- Cultural resources and tribal coordination
- Research, science, and protection of the physical environment

Our planning team considered every comment that was received during the public scoping process. These comments were grouped into related topics and subtopics as described in the scoping report posted on the CCP Web page (FWS 2011h). Significant issues are those that are within our jurisdiction, that suggest different actions or alternatives, and that will influence our decision.

Habitat and Wildlife Management

We manage a wide variety of habitats on the refuges, including wet meadows, playa wetlands, riparian areas within the floodplain of the Rio Grande, desert shrublands, grasslands, and croplands. The approximately 106,000 acres on the refuges provide important nesting, migrating, and wintering habitat for many bird species. The federally endangered southwestern willow flycatcher, a small neotropical migrant, is found fairly frequently in the willow–cottonwood corridor along the Rio Grande in the Alamosa Refuge. Several other Federal and State species of concern, including the Rio Grande sucker, Rio Grande chub, and northern leopard frog, are

found within or adjacent to the refuge. Many species of mammals use the refuge, including elk, deer, coyote, and porcupine.

Water in the refuge complex is actively managed to create habitat for migratory birds, including white-faced ibis, waterfowl, shorebirds, raptors, passerines, and the well-known populations of greater and lesser sandhill cranes. Some of these habitats may not be sustainable without a continued emphasis on water management. New State regulations require that all ground water users in the San Luis Valley replace depletions to streams resulting from their use of ground water. This augmentation of well use will affect refuge management.

Another concern is whether we should continue to provide barley, a nonnative crop that provides sandhill cranes and waterfowl with a high carbohydrate food source in a small area, but that also removes land and the associated water from the production of native vegetation. We are looking at the long-term sustainability of this supplemental feeding and whether increasing the restoration of native plant communities would result in unacceptable tradeoffs in these situations. Historic levels of naturally occurring food are not available for sandhill cranes during their spring migration. Not supplementing their diet with small grain, especially in the spring, could affect the health and vigor of the cranes. We will also address the role that we should play in the management of other migratory birds; endangered and threatened species; and species of concern found on the refuge complex.

The CCP and EIS addressed the issues associated with increasing elk populations across all the refuges. On the Baca Refuge in particular, elk are having a significant effect on some resources, particularly riparian areas. They are inhibiting the ability of willows to grow, which is detrimental to habitat for riparian species. Also, adjacent landowners have expressed concerns about the effect that elk are having on their lands.

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Hunting, including the harvest of elk across the refuge complex, was a key topic of interest in the planning process.

There has also been interest expressed in the reintroduction of the American bison on the Baca Refuge. Whether the Baca Refuge could support semi-free-ranging bison without negatively affecting other species is an issue of concern. The NPS at Great Sand Dunes National Park and Preserve is developing an ungulate management plan, and we are committed to sharing information and coordinating the two planning processes where possible.

Other issues to be addressed include the use of prescribed fire, livestock grazing, haying, farming, control of invasive species, wildland fire suppression, and management of diseases.

Water Resources

The topic of water is one of the biggest concerns for residents in the San Luis Valley. There is not a broad understanding of the refuge complex's portfolio of water rights and their decreed beneficial uses. Because water management is an important tool in providing food and habitat for birds, we commissioned a hydrogeomorphic analysis to look at historic water flows on the refuges. This information helped to inform alternatives development in the planning process.

The management and development of water resources must consider water rights, water quality, amount and timing of water use, the pumping of wells and the use of irrigation across the refuge complex, and the protection of wetlands, including playas, riparian areas, wet meadows, and the river corridor.

Landscape Conservation and Wilderness Review

Many individuals, organizations, and agencies have been involved in protecting wetlands and other areas in the San Luis Valley. The refuge complex plays an important role in this conservation effort. The Department of the Interior and other Federal agencies are committed to working with the State, local stakeholders, private landowners, and other partners to help conserve healthy lands and waters and promote tourism in the San Luis Valley and the Rio Grande corridor.

As required by Service policy, we reviewed whether any areas within the refuge complex would meet the values expressed in the Wilderness Act and the Service's Wilderness Stewardship Plan (FWS 2008) (appendix F).

Visitor Services

Hunting, including harvest of elk on all the refuges, is a key topic of interest in the planning process. There is both support for and opposition to the use of hunting as a management tool and a wildlife-dependent recreational activity.

There is also a desire by many groups, including the Friends of the San Luis Valley National Wildlife Refuges (Friends group), to invest more in environmental education and interpretation to educate visitors about the importance of the refuges and the history of the valley. The Baca Refuge, for example, is closed to the public. The types of potential services and access, the socioeconomic effects, and how energy development could affect visitor aesthetics on the Baca Refuge are considered in the CCP. These activities also affect refuge staff, operations, and infrastructure needs.

Partnerships and Refuge Operations

Many agencies, organizations, and landowners are currently working in partnership to accomplish many of our common goals, and the CCP provides for more opportunities to engage and collaborate with others. (Refer to chapter 4, section 4.9 for a list of our partners.) Wildlife populations are greatly affected by outside influences as well as conditions found within the refuges. Invasive species are a threat not only to the refuges, but to other Federal, State, and private landowners. Privately owned mineral rights, energy development on adjacent lands, fire management, and other rights of way influence future conditions on the refuges. Although we do not own the mineral rights on the Baca Refuge, we recognize that we need better strategies on how to handle the third-party mineral rights and their potential effects. The surface use agreements that come with the mineral rights limit how the refuge can manage potential effects. There is significant interest by many of our partners in thinking beyond the boundaries of each refuge to craft plans at the landscape scale whenever possible and to use a variety of mechanisms to accomplish our goals.

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These young wildlife enthusiasts check out the wildlife on Monte Vista Refuge. There is interest in having more opportunities for wildlife observation and interpretation on the refuge complex.

Refuge operations, particularly operational and infrastructure needs, are being considered. The Baca Refuge boundary has not been completely surveyed, posted, or fenced. The lack of boundary delineation results in trespassing and ownership conflicts. When the Baca Refuge was acquired, it came without any resources or money for operations, which has created challenges in managing the refuge complex. We also need to evaluate the operational demands (short-term and long-term) of the new Sangre de Cristo Conservation Area and the proposed San Luis Valley Conservation Area and find ways to sustain the easement programs. Throughout the refuge complex, there is a need to continually re-evaluate the allocation of staff, as current staff levels are not adequate to meet operational needs. For example, we had to greatly curtail our environmental education efforts because of lack of money for staff.

Increasing costs and the overall amount of energy used to pump needed water for Monte Vista Refuge raises the question of whether these activities are sustainable in the long term, particularly in light of the need to reduce energy use. A comprehensive condition assessment of infrastructure for water delivery and measurement is needed. Further, the upkeep of historic buildings on the refuges needs to be addressed.

FWS

The historic Deadman camp corral on Baca Refuge.

Cultural Resources and Tribal Coordination

About 12,000 years of history and prehistory have been documented on the refuges. In general, there has been outstanding cooperation between Federal agencies, tribes, and collectors to preserve and document the known cultural resources in the region.

Only about 5 percent of the areas found on the refuges have been comprehensively inventoried. Concern exists that the lack of information could lead to the destruction of important sites. Lack of research, concerns about destruction and vandalism, lack of staff to maintain legal obligations for compliance, and our ongoing relationships with tribes, collectors, and other agencies are all important issues addressed in the CCP and EIS.

Research, Science, and Protection of the Physical Environment

The refuge complex exists in a unique area in terms of some of the protected environments and large, contiguous tracts of open land. Multiple agencies, the scientific community, a local university, a junior college, and some private citizens are all interested in protecting the values of the area. We believe there are many opportunities to work with others to achieve our research and science needs.

Baca Refuge is adjacent to designated and proposed wilderness and a class I air quality area. Other physical attributes include the immense dark night sky and quiet soundscapes. These were identified as important qualities by many residents in the surrounding community.

Climate change is one of the biggest issues affecting plants and wildlife today across our lands. In the San Luis Valley, current data suggest that climate change could be affecting the valley in ways such as increased temperatures (FWS 2010, BOR 2013b) and earlier snowmelts in the western United States (Karl et al. 2009). On adjacent forest lands, there have been dramatic changes in forest vegetation because of large areas of diseased trees, which could lead to changes in water flow. Longer periods of drought may become more common. These changes could threaten many species in the valley and on the refuges, particularly those species that depend on wetland, riparian, and open water habitats. Even if the refuges enhance habitat through water manipulation, sandhill cranes, waterfowl, and other migratory birds may suffer because of conditions in other parts

of the valley. Strategies for managing the refuges in light of climate change, a declining aquifer, energy development, wildlife diseases, and invasive species are important issues to address in the planning process.

1.8 Issues Not Addressed

We considered several issues that were identified by the public during scoping and alternatives development but that were not selected for detailed analysis in the CCP and EIS. In accordance with requirements of NEPA, we identified and eliminated from detailed analysis the topics or issues that are not significant or are out of the scope of the planning process. These issues and the rationale for not discussing them further in the CCP and EIS are briefly described below.

FWS

The Alamosa Refuge is one of over 550 national wildlife refuges in the Refuge System.

Development of Mineral Rights

The United States does not own the mineral rights within large portions of the Baca Refuge. The final CCP and EIS does not address the rights of private property owners to exercise their rights to extract any locatable minerals or oil and gas within or adjacent to the refuge. Any exploration or other activities supporting the testing, development, or production of gas, oil, and other resources would be analyzed through an additional and separate NEPA process designed to address that issue specifically. While this CCP does not analyze any future mineral development, we are looking at how habitat, wildlife, and visitor services should be managed if private mineral development occurs on the Baca Refuge.

Baca Oil and Gas Environmental Assessment

Lexam VG Gold, Inc., an owner of a mineral interest below parts of the surface estate of the Baca Refuge, has proposed drilling two wells to explore for oil and gas on the refuge. Following the development of an environmental assessment in January 2011 in which several stipulations were developed to protect the resources of the refuge and minimize the effects on the surface estate of Baca Refuge, we issued a finding of no significant impact for the proposal by Lexam. The CCP and EIS does not readdress the decision made on April 1, 2011, for two test wells (FWS 2011b). Any more exploration wells or activities supporting the production of natural gas or oil on the refuge would be analyzed through an additional and separate NEPA process.

Closed Basin Project

The closed basin is a hydrological basin with no surface outlet that encompasses most of the northern half of the San Luis Valley floor. BOR runs the San Luis Valley Closed Basin Project, which collects and diverts unconfined ground water and available surface flows within the closed basin that would otherwise be lost to evapotranspiration (BOR 2013a). Parts of the Closed Basin Project are within Alamosa and Baca National Wildlife Refuges. The CCP and EIS does not address any jurisdictional, operational, or infrastructure issues related to this project. The legislation authorizing Baca Refuge specifically states that infrastructure used in the operation, maintenance, repair, and replacement of any features associated with the project are not affected by the Great Sand Dunes National Park and Preserve Act of 2000.

Refuge Revenue-Sharing Payments

Since 1935, we have made revenue-sharing payments for refuge land under our administration to counties under the Refuge Revenue Sharing Act of 1935 (16 U.S.C. 715s), which was subsequently amended. These payments are not the same as other Federal revenue-sharing measures such as Payments in Lieu of Taxes, which applies to lands administered by other agencies, including those within the Department of the Interior. When there is not enough money to cover the payments, Congress is authorized to appropriate money to make up the deficit; however, payments to a county are reduced when Congress fails to appropriate the money. Understandably, these are issues of concern for many counties in times of declining revenues, but the Service has no control over Congress in making these payments. This issue was outside the scope of the final CCP and EIS.

Military Overflights

The United States Air Force prepared a draft environmental assessment to evaluate the potential environmental consequences of establishing a Low Altitude Tactical Navigation Area in northern New Mexico and southern Colorado (USAF 2011). The navigation area would provide airspace to C-130 and CV-22 aircraft for training purposes. The Federal Aviation Administration has the responsibility to plan, manage, and control the structure and use of all airspace over the United States. Day-to-day airspace designation, design, and management are delegated through the Federal Aviation Administration to the military.

The Improvement Act specifically exempted overflights above a refuge from compatibility requirements (FWS 2000a). Except for any cumulative effects that would occur as the result of our proposed actions, the CCP and EIS does not address whether military overflights could occur over the refuge complex, as these issues are outside the scope of the analysis.

Water Rights and Water Use Off the Refuge Complex

As described under section 1.7 above, the topic of water management and use is a concern for everyone in the San Luis Valley. In this CCP and EIS, we have provided information about how the hydrology of the water systems affects our management of the refuges, including a discussion of our water rights, and our use of water for accomplishing our habitat and wildlife purposes and for providing compatible wildlife-dependent recreation. We manage our water resources to achieve our refuge objectives based on the overall availability of water resources and within the restrictions dictated by the legal decrees, authorizing legislation, and existing leases. Except for any cumulative effects that are directly related to the actions identified in the alternatives (refer to chapter 3 of the Final CCP and EIS), any discussion of water rights or the public's use of water off the refuge complex is outside the scope of the analysis. While we recognize the importance of these issues, the management and use of refuge water resources off the refuge complex is not subject to Service policy (refer to section 1.9).

1.9 Scope of the Document

The scope of our decisions and analysis in the final CCP and EIS was broken out into two areas, decision area and analysis area.

Decision Area

The decision area for the CCP is the area within the designated boundaries of Monte Vista National Wildlife Refuge, Alamosa National Wildlife Refuge, and Baca National Wildlife Refuge (figure 7; refer to chapter 2 for a complete description of the refuge complex). Refer to appendix A for the Record of Decision.

Analysis Area

The analysis area (figure 7) includes the decision area as well as areas outside the decision area where most of the direct, indirect, or cumulative effects could occur as a result of implementing the actions found in the alternatives. These effects are described in chapters 4 and 5 of the final CCP and EIS.

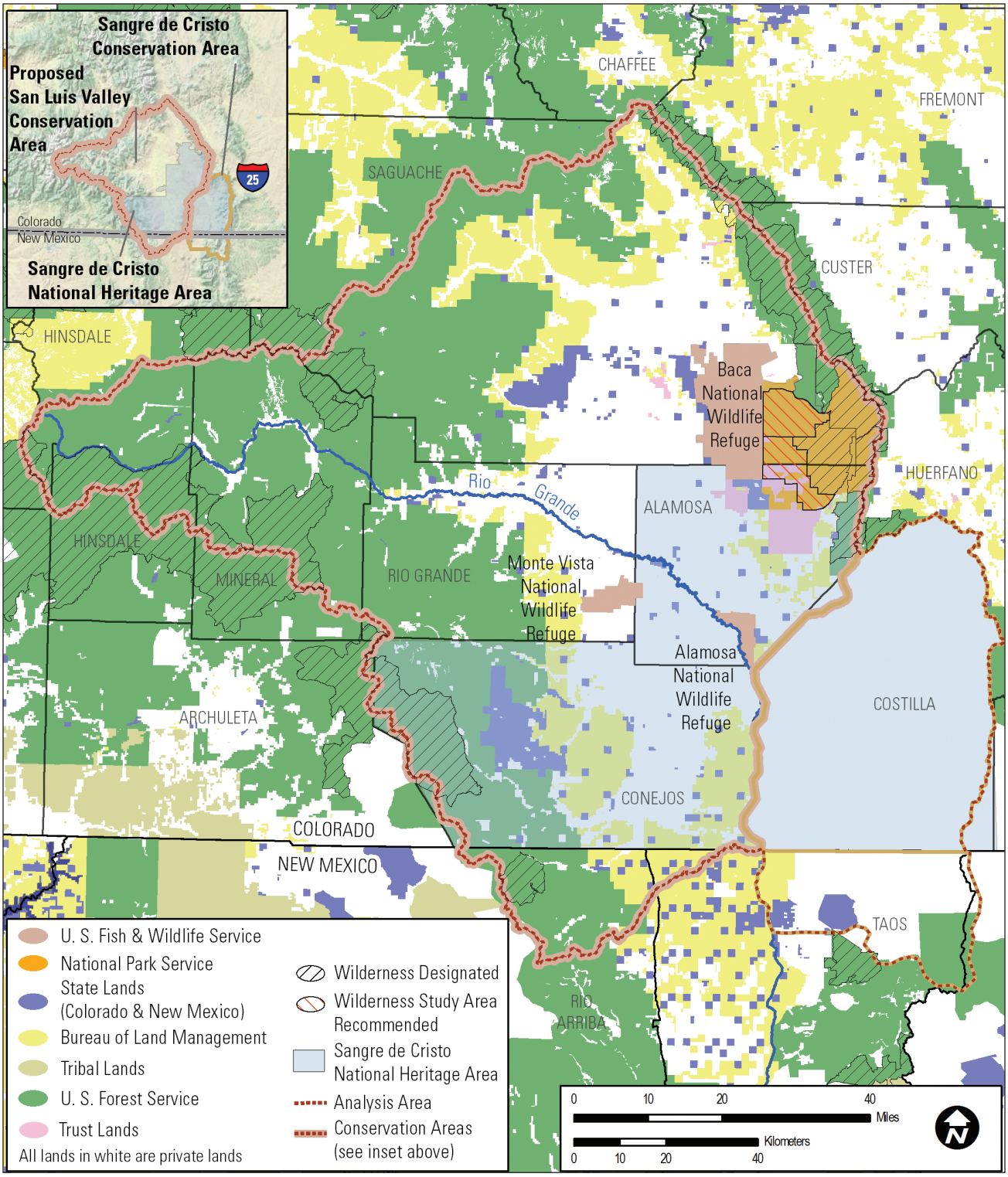

Figure 7. Analysis and decision areas for the CCP.