

Glossary

accessible—Pertaining to physical access to areas and activities for people of different (abilities, especially those) with physical impairments.

active management—The direct manipulation of habitats or wildlife populations to achieve specific objectives. Actions could include planting food plots, managing water levels, prescribed grazing or fire, or wildlife relocations.

adaptive resource management—The rigorous application of management, research, and monitoring to gain information and experience necessary to assess and change management activities; a process that uses feedback from research, monitoring, and evaluation of management actions to support or change objectives and strategies at all planning levels; a process in which policy decisions are carried out within a framework of scientifically driven experiments to test predictions and assumptions inherent in management plan. Analysis of results helps managers determine whether current management should continue as is or whether it should be modified to achieve desired conditions.

Administration Act—National Wildlife Refuge System Administration Act of 1966.

alternative—A reasonable way to solve an identified problem or satisfy the stated need (40 CFR 1500.2); one of several different means of accomplishing refuge purposes and goals and contributing to the Refuge System mission (The “Fish and Wildlife Service Manual,” 602 FW 1.5).

amphibian—A class of cold-blooded vertebrates including frogs, toads, or salamanders.

annual—A plant that flowers and dies within 1 year of germination.

appropriate use—A proposed or existing uses on national wildlife refuges that meet at least one of the following—(1) is a wildlife-dependent recreational use; (2) contributes to fulfilling refuge purposes, the Refuge System mission, or goals and objectives outline in a CCP; or (3) the refuge manager has evaluated the use and found it to be appropriate.

ATV—All-terrain vehicle.

AUM—Animal-unit month.

baseline—A set of critical observations, data, or information used for comparison or a control.

BCR—Bird conservation region.

biological control—The use of organisms or viruses to control invasive plants or other pests.

biological diversity, also biodiversity—The variety of life and its processes including the variety of living organisms, the genetic differences among them, and the communities and ecosystems in which they occur (The “Fish and Wildlife Service Manual,” 052 FW 1.12B). The National Wildlife Refuge System’s focus is on indigenous species, biotic communities, and ecological processes.

biological integrity—Biotic composition, structure, and function at genetic, organism, and community levels.

biotic—Pertaining to life or living organisms; caused, produced by, or comprising living organisms.

BLM—See Bureau of Land Management.

Bureau of Land Management (BLM)—A Federal agency under the Department of Interior that was established in 1946 through consolidation of the General Land Office and U.S. Grazing Service. The agency has a multiple-use mandate is responsible for a variety of programs for managing and conserving surface and subsurface mineral estates, mostly in the western United States.

Bureau of Reclamation (BOR)—A Federal agency under the Department of Interior that oversees dams, power plants, and canals. The agency oversees the Closed Basin Project in the San Luis Valley which was built to fulfil water obligation delivery downstream of Colorado.

canopy—A layer of foliage, generally the uppermost layer, in a vegetative stand; midlevel or understory vegetation in multilayered stands. Canopy closure (also canopy cover) is an estimate of the amount of overhead vegetative cover.

CCP—See comprehensive conservation plan.

CFR—See Code of Federal Regulations.

cervid—All members of the family Cervidae and hybrids including deer, elk, moose, caribous, reindeer, and related species.

CFR—See Code of Federal Regulations.

cfs—Cubic feet per second.

CO₂—Carbon dioxide.

Code of Federal Regulations (CFR)—The codification of the general and permanent rules published in the Federal Register by the Executive departments and agencies of the Federal Government. Each

volume of the CFR is updated once each calendar year.

Colorado Division of Water Resources (DWR)—State of Colorado agency charged with management of the State’s water resources including administering water rights and issuing water well permits. Also known as the Office of the State Engineer.

Colorado Division of Wildlife (CDOW)—See Colorado Parks and Wildlife.

Colorado Parks and Wildlife (CPW)—State of Colorado wildlife agency; formerly Colorado Division of Wildlife (CDOW)

compatibility determination—See compatible use.

compatible use—A wildlife-dependent recreational use or any other use of a refuge that, in the sound professional judgment of the Director of the U.S. Fish and Wildlife Service, will not materially interfere with or detract from the fulfillment of the mission of the Refuge System or the purposes of the refuge (The “Fish and Wildlife Service Manual” 603 FW 3.6). A compatibility determination supports the selection of compatible uses and identified stipulations or limits necessary to ensure compatibility.

comprehensive conservation plan (CCP)—A document that describes the desired future conditions of the refuge and provides long-range guidance and management direction for the refuge manager to accomplish the purposes of the refuge, contribute to the mission of the Refuge System, and to meet other relevant mandates (The “Fish and Wildlife Service Manual,” 602 FW 1.5).

concern—See issue.

conservation area—Conservation areas are units of the Refuge System and are established under the authority of the Fish and Wildlife Act of 1958. They outline a boundary within which the Service may use Land and Water Conservation Fund Act fund (or other funding sources) to purchase easements from willing sellers.

conservation district—Organized in the 1930s as a response to the severe erosion problems, a district is often a political subdivision of a State. Money comes from assessments levied on real property within the boundaries of the district. It helps citizens in conserving renewable natural resources.

cool-season grasses—Grasses that begin growth earlier in the season and often become dormant in the summer. These grasses will germinate at lower temperatures. Examples of cool-season grasses at the refuge are western wheatgrass, needle and thread, and green needlegrass.

county road—In general, means any public highway opened, established, constructed, maintained, abandoned in accordance with State law.

cover, cover type, canopy cover—Present vegetation.

cultural resources—The remains of sites, structures, or objects used by people in the past.

depredation—Destruction or consumption of eggs, broods, or individual wildlife due to a predatory animal; damage inflicted on agricultural crops or ornamental plants by wildlife.

dispersal hunting—A limited public hunt used primarily to control elk numbers and their distribution

DOI—Department of the Interior.

drawdown—The act of manipulating water levels in an impoundment to allow for the natural drying-out cycle of a wetland.

EA—See environmental assessment.

ecological resilience—The ability to absorb disturbances, to be changed, and then to reorganize and still have the same identity, that is, keep the same basic structure and ways of functioning. A resilient system is forgiving of external shocks; a disturbance is unlikely to affect the whole. A resilient habitat (1) sustains many species of plants and animals and a highly variable structural composition; (2) is asymmetric; (3) exemplifies biological integrity, biological diversity, and environmental health; and (4) adapts to climate change.

ecosystem—A dynamic and interrelating complex of plant and animal communities and their associated nonliving environment; a biological community, together with its environment, functioning as a unit. For administrative purposes, the Service has designated 53 ecosystems covering the United States and its possessions. These ecosystems generally correspond with watershed boundaries and their sizes and ecological complexity vary.

ecosystem resilience—See ecological resilience.

EIS—Environmental impact statement.

endangered species, Federal—A plant or animal species listed under the Endangered Species Act of 1973, as amended, that is in danger of extinction throughout all or a significant part of its range.

endangered species, State—A plant or animal species in danger of becoming extinct or extirpated in a particular State within the near future if factors contributing to its decline continue. Populations of these species are at critically low levels or their habitats have been degraded or depleted to a significant degree.

endemic species—Plants or animals that occur naturally in a certain region and whose distribution is relatively limited to a particular locality.

environmental assessment—A concise public document, prepared in compliance with the National Environmental Policy Act, that briefly discusses the purpose and need for an action and alternatives to such action, and provides sufficient evi-

- dence and analysis of effects to determine whether to prepare an environmental impact statement or finding of no significant impact (40 CFR 1508.9).
- environmental health**—Composition, structure, and functioning of soil, water, air, and other abiotic features.
- EPA**—Environmental Protection Agency.
- ephemeral**—Lasting for a very short time; short-lived; transitory;
- extinction**—The complete disappearance of a species from the earth; no longer existing.
- extirpation**—The extinction of a population; complete eradication of a species within a specified area.
- fauna**—All the vertebrate and invertebrate animals of an area.
- Federal trust resource**—A trust is something managed by one entity for another who holds the ownership. The Service holds in trust many natural resources for the people of the United States as a result of Federal acts and treaties. Examples are species listed under the Endangered Species Act, migratory birds protected by international treaties, and native plant or wildlife species found on a national wildlife refuge.
- Federal trust species**—All species where the Federal Government has primary jurisdiction including federally endangered or threatened species, migratory birds, anadromous fish, and certain marine mammals.
- fire management plan (FMP)**—A plan that identifies and integrates all wildland fire management and related activities within the context of approved land and resource management plans. The plan defines a program to manage wildland fires (wild-fire and prescribed fire).
- focal species**—A multispecies approach where the ecological needs of a suite of species are used to define an ideal landscape to maintain the range of habitat conditions and ecological processes required by landbirds or other species. Focal species are considered most sensitive to or limited by certain ecological processes (such as fire or nest predation) or habitat attributes (such as patch size). The needs of a suite of focal species are then used to help guide management activities.
- forb**—A broad-leaved, herbaceous plant; a seed-producing annual, biennial, or perennial plant that does not develop persistent woody tissue but dies down at the end of the growing season.
- fragmentation**—The alteration of a large block of habitat that creates isolated patches of the original habitat that are interspersed with a variety of other habitat types; the process of reducing the size and connectivity of habitat patches, making movement of individuals or genetic information between parcels difficult or impossible.
- Friends group**—Any formal organization whose mission is to support the goals and purposes of its associated refuge and the National Wildlife Refuge Association overall; Friends organizations and cooperative and interpretive associations.
- FTE**—A full-time equivalent; one or more job positions with tours of duty that, when combined, equate to one person employed for the standard Government work-year.
- FWS**—See U.S. Fish and Wildlife Service.
- genetically modified crops (GMOs)**—Plants used in agriculture where the genetic material has been modified in a way that does not occur naturally in the species.
- geocaching**—A high-technology scavenger hunt in which objects are hidden at secret outdoor locations for participants to find using Global Positioning System positions posted on the Internet.
- geographic information system (GIS)**—A computer system capable of storing and manipulating spatial data; a set of computer hardware and software for analyzing and displaying spatially referenced features (such as points, lines and polygons) with nongeographic attributes such as species and age.
- GIS**—See geographic information system.
- Global Positioning System (GPS)**—A navigational system involving satellites that allows a user with a receiver to determine precise coordinates for their location on the earth's surface.
- goal**—Descriptive, open-ended, and often broad statement of desired future conditions that conveys a purpose but does not define measurable units (The "Fish and Wildlife Service Manual," 620 FW 1.5).
- GPS**—See Global Positioning System.
- GS**—General Schedule (pay rate schedule for certain Federal positions).
- graminoids**—of or relating to grasses.
- habitat**—Suite of existing environmental conditions required by an organism for survival and reproduction; the place where an organism typically lives and grows.
- habitat disturbance**—Significant alteration of habitat structure or composition; may be natural (for example, wildfire) or human-caused events (for example, timber harvest and disking).
- habitat management plan (HMP)**—A stepdown plan to a comprehensive conservation plan that identifies in detail how the objectives and strategies for uplands, riparian areas, river bottoms, and shorelines will be carried out.
- Habitat Partnership Program (HPP)**—A program funded by revenue from the sale of big game licenses in Colorado which develops partnerships among landowners, land managers, sportsmen and women, the public, and Colorado Parks and

Wildlife to reduce wildlife conflict, particularly conflict associated with forage and fencing. In the San Luis Valley, there are two HPP committees, Mount Blanca and San Luis Valley.

habitat type, also vegetation type, cover type—A land classification system based on the concept of distinct plant associations.

HDP—See height density plot.

herbivory—Grazing of grass and other plants by any animal.

heterogeneity—diversity or dissimilar species within a landscape

HMP—See habitat management plan.

HUA—Hydrologic unit area.

hunnable—A species that can be hunted on the refuge in accordance with Federal and State regulations.

Hydrogeomorphic methodology evaluation (HGM)—An evaluation of ecosystem restoration and management options. The study evaluates historical and current information about geology, geomorphology, soils, topography, hydrology, plant and animal communities, and other factors for designing future restoration or management approaches.

IMPLAN—Impact Analysis for Planning.

impoundment—A body of water created by collection and confinement within a series of levees or dikes, creating separate management units although not always independent of one another.

Improvement Act—National Wildlife Refuge System Improvement Act of 1997.

indigenous—Originating or occurring naturally in a particular place.

inholding—Non-Service land owned by private, other agency, or other group landowners that is within the boundary of a national wildlife refuge.

integrated pest management—Methods of managing undesirable species such as invasive plants; education, prevention, physical or mechanical methods of control, biological control, responsible chemical use, and cultural methods.

introduced species—A species present in an area due to intentional or unintentional escape, release, dissemination, or placement into an ecosystem as a result of human activity.

invasive plant, also noxious weed—A species that is nonnative to the ecosystem under consideration and whose introduction causes, or is likely to cause, economic or environmental harm or harm to human health.

invertebrates—An animal that lacks an internal skeleton or backbone such as insects, butterflies, and aquatic species like snails.

inviolate sanctuary—A place of refuge or protection where animals and birds may not be hunted.

issue—Any unsettled matter that requires a management decision; for example, a Service initia-

tive, opportunity, resource management problem, a threat to the resources of the unit, conflict in uses, public concern, or the presence of an undesirable resource condition (The “Fish and Wildlife Service Manual,” 602 FW 1.5).

lentic—Still-water wetlands. These wetlands occur in basins and lack a defined channel and floodplain. Examples include perennial, intermittent bodies of water like lakes, reservoirs, stock ponds.

lotic—Flowing water wetlands are associated with rivers, streams and drainage ways. These riparian wetlands contain a defined channel and floodplain.

management alternative—See alternative.

migration—Regular extensive, seasonal movements of birds between their breeding regions and their wintering regions; to pass usually periodically from one region or climate to another for feeding or breeding.

migratory birds—Birds that follow a seasonal movement from their breeding grounds to their wintering grounds. Waterfowl, shorebirds, raptors, and songbirds are all migratory birds.

mimic—To copy or imitate closely; to take on the appearance of.

mission—Succinct statement of purpose or reason for being.

mitigation—Measure designed to counteract an environmental impact or to make an impact less severe.

monitoring—The process of collecting information to track changes of selected parameters over time.

national wildlife refuge—A designated area of land, water, or an interest in land or water within the National Wildlife Refuge System, but does not include coordination areas; a complete listing of all units of the Refuge System is in the current “Annual Report of Lands Under Control of the U.S. Fish and Wildlife Service.”

National Park Service (NPS)—A Federal agency under the Department of Interior which oversees the care of the Nation’s National Parks.

Natural Resources Conservation Service (NRCS)—A Federal agency under the Department of Agriculture. Formerly the Soil Conservation Service (SCS), the agency works with landowners through conservation planning and assistance designed to benefit the soil, water, air, plants, and animals that result in productive lands and healthy ecosystems.

National Wildlife Refuge System (Refuge System)—Various categories of areas administered by the Secretary of the Interior for the conservation of fish and wildlife including species threatened with extinction, all lands, waters, and interests therein administered by the Secretary as wildlife refuges, areas for the protection and conservation of

fish and wildlife that are threatened with extinction, wildlife ranges, game ranges, wildlife management areas, and waterfowl production areas.

National Wildlife Refuge System Improvement Act of 1997 (Improvement Act)—Sets the mission and the administrative policy for all refuges in the National Wildlife Refuge System; defines a unifying mission for the Refuge System; establishes the legitimacy and appropriateness of the six priority public uses (hunting, fishing, wildlife observation, wildlife photography, environmental education, and interpretation); establishes a formal process for determining appropriateness and compatibility; establishes the responsibilities of the Secretary of the Interior for managing and protecting the Refuge System; requires a comprehensive conservation plan for each refuge by the year 2012. This act amended portions of the Refuge Recreation Act and National Wildlife Refuge System Administration Act of 1966.

native species—A species that, other than as a result of an introduction, historically occurred or currently occurs in that ecosystem.

neonicotinoid—A relatively new class of insecticides that share a common mode of action that affects the central nervous system of insects. It is chemically similar to nicotine.

neotropical migrant—A bird species that breeds north of the United States and Mexican border and winters primarily south of this border.

nest success—The percentage of nests that successfully hatch one or more eggs of the total number of nests initiated in an area.

nongovernmental organization—Any group that is not a Federal, State, tribal, county, city, town, local, or other governmental entity.

noxious weed, also invasive plant—Any living stage (including seeds and reproductive parts) of a parasitic or other plant of a kind that is of foreign origin (new to or not widely prevalent in the United States) and can directly or indirectly injure crops, other useful plants, livestock, poultry, other interests of agriculture including irrigation, navigation, fish and wildlife resources, or public health. According to the Federal Noxious Weed Act (Public Law 93–639), a noxious weed (can be invasive too) is one that causes disease or has adverse effects on humans or the human environment and, therefore, is detrimental to the agriculture and commerce of the United States and to public health.

NWR—National wildlife refuge.

objective—An objective is a concise target statement of what will be achieved, how much will be achieved, when and where it will be achieved, and who is responsible for the work; derived from goals and provide the basis for determining man-

agement strategies. Objectives should be attainable and time-specific and should be stated quantitatively to the extent possible. If objectives cannot be stated quantitatively, they may be stated qualitatively (The “Fish and Wildlife Service Manual,” 602 FW 1.5).

patch—An area distinct from that around it; an area distinguished from its surroundings by environmental conditions.

perennial—Lasting or active through the year or through many years; a plant species that has a lifespan of more than 2 years.

plant community—An assemblage of plant species unique in its composition; occurs in particular locations under particular influences; a reflection or integration of the environmental influences on the site such as soil, temperature, elevation, solar radiation, slope, aspect, and rainfall; denotes a general kind of climax plant community, such as ponderosa pine or bunchgrass.

playa habitat—Wetlands that are usually described as shallow, typically round, ephemeral bodies of water with clay floors that lie in the lowest point of a closed watershed. When wet, these saline wetlands provide important habitat for many bird species.

preferred alternative—The Service’s final selection (after analysis of alternatives in a draft NEPA document) of a management alternative to carry out, which is documented in a “record of decision” for an EIS or a “finding of no significant impact” for an EA and published in the Federal Register. The decision is based on the legal responsibility of the Service including the missions of the Service and the Refuge System, other legal and policy mandates, the purpose of the refuge, and the vision and goals in the final CCP. In addition, the Service considers public, tribal, and agency input along with land uses in the ecosystem, environmental effects, and budget projections.

prescribed fire—A wildland fire originating from a planned ignition to meet specific objectives identified in a written, approved, prescribed fire plan for which NEPA requirements (where applicable) have been met before ignition. These objectives could be hazardous fuel reduction, habitat- or wildlife-oriented, or other objectives in the prescribed fire burn plan.

prescriptive grazing—The planned application of livestock grazing at a specified season, duration and intensity to accomplish specific vegetation management objectives. The objectives are designed to achieve the broader habitat and wildlife goals.

priority public use—One of six uses authorized by the National Wildlife Refuge System Improvement Act of 1997 to have priority if found to be compatible with a refuge’s purposes. This includes hunt-

ing, fishing, wildlife observation, wildlife photography, environmental education, and interpretation.

properly functioning condition—Qualitative method for assessing the condition of riparian-wetland areas. It describes both the assessment and the conditions of the wetland area. It evaluates how well the physical processes are functioning through use of a checklist.

proposed action—The alternative proposed to best achieve the purpose, vision, and goals of a refuge (contributes to the Refuge System mission, addresses the significant issues, and is consistent with principles of sound fish and wildlife management).

public—Individuals, organizations, and groups; officials of Federal, State, and local government agencies; Native American tribes; and foreign nations. It may include anyone outside the core planning team. It includes those who may or may not have shown an interest in Service issues and those who do or do not realize that Service decisions may affect them.

public domain—Lands that were not under private or State ownership during the 18th and 19th centuries in the United States, as the country was expanding. These lands were obtained from the 13 colonies, Native American tribes, or purchases from other counties. The domain was controlled by the Federal Government and sold to States or private interests through the General Land Office, which would eventually become the Bureau of Land Management.

public involvement—A process that offers affected and interested individuals and organizations an opportunity to become informed about, and to express their opinions on, Service actions and policies. In the process, these views are studied thoroughly and thoughtful consideration of public views is given in shaping decisions for refuge management.

purpose of the refuge—The purpose of a refuge is specified in or derived from the law, proclamation, Executive order, agreement, public land order, donation document, or administrative memorandum establishing authorization or expanding a refuge, a refuge unit, or a refuge subunit (The “Fish and Wildlife Service Manual,” 602 FW 1.5).

quality wildlife-dependent recreation—Programs are based on 11 criteria that defined under 605 FW1, “General Guidelines for Wildlife-Dependent Recreation.” Quality programs include the following—safety of participants and compliance with laws and regulations; minimized conflicts with other goals or users; accessibility, stewardship, and availability to a broad spectrum of the American people; public understanding and appreciation

of the natural resources; reliable and reasonable opportunities to experience wildlife; accessible facilities that blend in with the natural setting; and visitor satisfaction to help define and evaluate programs.

raptor—A carnivorous bird such as a hawk, a falcon, or a vulture that feeds wholly or chiefly on meat taken by hunting or on carrion (dead carcasses).

refuge purpose—See purpose of the refuge.

Refuge System—See National Wildlife Refuge System.

refuge use—Any activity on a refuge, except administrative or law enforcement activity, carried out by or under the direction of an authorized Service employee.

resident species—A species inhabiting a given locality throughout the year; nonmigratory species.

resilience—The ability to absorb disturbances, to be changed and then to reorganize and still have the same identity (keep the same basic structure and ways of functioning).

rest—Free from biological, mechanical, or chemical manipulation, in reference to refuge lands.

restoration—Management emphasis designed to move ecosystems to desired conditions and processes, such as healthy upland habitats and aquatic systems.

riparian area or riparian zone—An area or habitat that is transitional from terrestrial to aquatic ecosystems including streams, lakes, wet areas, and adjacent plant communities and their associated soils that have free water at or near the surface; an area whose components are directly or indirectly attributed to the influence of water; of or relating to a river; specifically applied to ecology, “riparian” describes the land immediately adjoining and directly influenced by streams. For example, riparian vegetation includes all plant life growing on the land adjoining a stream and directly influenced by the stream.

RLGIS—Refuge land geographic information system.

SAMMS—See Service Asset Maintenance Management System.

San Luis Valley (SLV)—An extensive high-altitude basin in Colorado with a small portion overlapping into New Mexico covering about 8,000 square miles and sitting at an average elevation of 7,664 feet. It is drained to the south by the Rio Grande. The valley is about 122 miles long and 74 miles wide.

scoping—The process of obtaining information from the public for input into the planning process.

seasonally flooded—Surface water is present for extended periods in the growing season, but is absent by the end of the season in most years.

sediment—Material deposited by water, wind, and glaciers.

Service—See U.S. Fish and Wildlife Service.

Service Asset Maintenance Management System (SAMMS)—A national database that contains the unfunded maintenance needs of each refuge; projects include those required to maintain existing equipment and buildings, correct safety deficiencies for the implementation of approved plans, and meet goals, objectives, and legal mandates.

shorebird—Any of a suborder (Charadrii) of birds such as plovers or sandpipers that frequent wetlands.

shrub-grass—This habitat type occurs in areas of Baca National Wildlife Refuge that receive high amounts of subsurface irrigation from adjacent wet meadows. These areas provide valuable wetland habitat for multiple native species. It has patches of dense graminoids in the understory. The overstory is dominated by rubber rabbitbrush, but other shrubs like greasewood may also be present.

spatial—Relating to, occupying, or having the character of space.

special status species—Plants or animals that have been identified through Federal law, State law, or agency policy as requiring special protection of monitoring. Examples include federally listed endangered, threatened, proposed, or candidate species; State-listed endangered, threatened, candidate, or monitor species; Service's species of management concern; or species identified by the Partners in Flight Program as being of extreme or moderately high conservation concern.

special use permit—A permit for special authorization from the refuge manager required for any refuge service, facility, privilege, or product of the soil provided at refuge expense and not usually available to the public through authorizations in Title 50 CFR or other public regulations (Refuge Manual, 5 RM 17.6).

species of concern—Those plant and animal species, while not falling under the definition of special status species, that are of management interest by virtue of being Federal trust species such as migratory birds, important game species, or significant keystone species; species that have documented or apparent populations declines, small or restricted populations, or dependence on restricted or vulnerable habitats.

stepdown management plan—A plan that provides the details necessary to carry out management strategies identified in the comprehensive conservation plan (The "Fish and Wildlife Service Manual," 602 FW 1.5).

strategy—A specific action, tool, or technique or combination of actions, tools, and techniques used to meet unit objectives (The "Fish and Wildlife Service Manual," 602 FW 1.5).

suppression—All the work of extinguishing a fire or confining fire spread.

surrogate species—species that represent other species or aspects of the environment. These include umbrella, focal, keystone, indicator, and flagship species. It is a commonly-used scientific term for system-based conservation planning that uses a species as an indicator of landscape habitat and system conditions.

target species—A species selected, because of specific biological or social reasons, for management and monitoring. A target species could be a focal, endangered, big game, or other species.

TES—Threatened and endangered species.

threatened species, Federal—Species listed under the Endangered Species Act of 1973, as amended, that are likely to become endangered within the foreseeable future throughout all or a significant part of their range.

threatened species, State—A plant or animal species likely to become endangered in a particular State within the near future if factors contributing to population decline or habitat degradation or loss continue.

Total Maximum Daily Load (TMDL)—A calculation of the maximum amount of pollutant that a waterbody can receive and still safely meet water quality standards.

travel corridor—A landscape feature that facilitates the biologically effective transport of animals between larger patches of habitat dedicated to conservation functions. Such corridors may facilitate several kinds of traffic including frequent foraging movement, seasonal migration, or the once in a lifetime dispersal of juvenile animals. These are transition habitats and need not contain all the habitat elements required for long-term survival or reproduction of its migrants.

trust resource—See Federal trust resource.

trust species—See Federal trust species.

ungulate—A hoofed mammal such as horses, cattle, deer, elk, pronghorn, and bighorn sheep.

U.S.C.—United States Code.

USDA—U.S. Department of Agriculture.

USDA Forest Service (USFS)—A Federal agency under the Department of Agriculture which oversees management of national forests.

U.S. Fish and Wildlife Service (Service, USFWS, FWS)—The principal Federal agency responsible for conserving, protecting, and enhancing fish and wildlife and their habitats for the continuing benefit of the American people. The Service manages the 93-million-acre National Wildlife Refuge System comprised of more than 530 national wildlife refuges and thousands of waterfowl production areas. It also runs 65 national fish hatcheries and 78 ecological service field stations, the agency

enforces Federal wildlife laws, manages migratory bird populations, restores national significant fisheries, conserves and restores wildlife habitat such as wetlands, administers the Endangered Species Act, and helps foreign Governments with their conservation efforts. It also oversees the Federal aid program that distributes millions of dollars in excise taxes on fishing and hunting equipment to State wildlife agencies.

USFWS—See U.S. Fish and Wildlife Service.

U.S. Geological Survey (USGS)—A Federal agency whose mission is to provide reliable scientific information to describe and understand the earth; minimize loss of life and property from natural disasters; manage water, biological, energy, and mineral resources; and enhance and protect our quality of life.

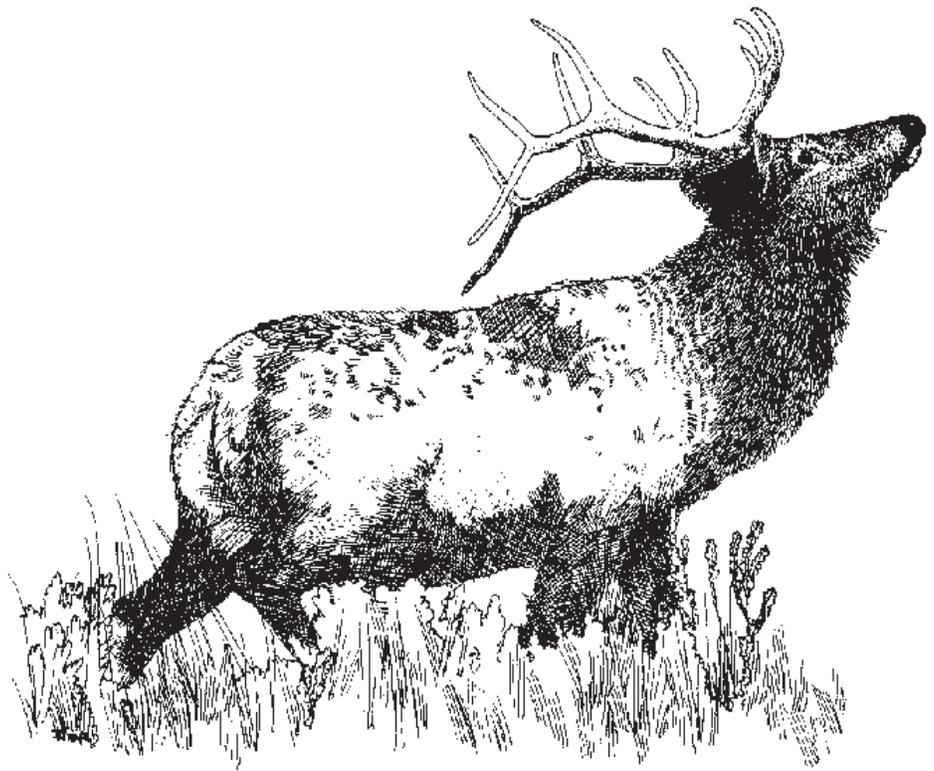
USGS—See U.S. Geological Survey.

vision statement—A concise statement of the desired future condition of the planning unit, based primarily on the Refuge System mission, specific refuge purposes, and other relevant mandates (The “Fish and Wildlife Service Manual,” 602 FW 1.5).

wildfire—A wildland fire originating from an unplanned ignition caused by lightning, volcanoes, unauthorized and accidental human-caused fires, and escaped prescribed fires.

wildland fire—A general term describing any non-structure fire that occurs in the wildland.

Appendixes



Appendix A

Key Legislation and Policies

This appendix briefly describes the guidance for the National Wildlife Refuge System and other policies and key legislation that guide the management of the San Luis Valley National Wildlife Refuge Complex.

A.1 National Wildlife Refuge System

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. (National Wildlife Refuge System Improvement Act of 1997.)

Goals

- Conserve a diversity of fish, wildlife, and plants and their habitats, including species that are endangered or threatened with becoming endangered.
- Develop and maintain a network of habitats for migratory birds, anadromous and inter-jurisdictional fish, and marine mammal populations that is strategically distributed and carefully managed to meet important life history needs of these species across their ranges.
- Conserve those ecosystems, plant communities, wetlands of national or international significance, and landscapes and seascapes that are unique, rare, declining, or under-represented in existing protection efforts.
- Provide and enhance opportunities to participate in compatible wildlife-dependent

recreation (hunting, fish, wildlife observation and photography, and environmental education and interpretation).

- Foster understanding and instill appreciation of the diversity and interconnectedness of fish, wildlife, and plants and their habitats.

Guiding Principles

There are four guiding principles for management and public use of the Refuge System established by Executive Order 12996 (1996):

- **Public Use**—The Refuge System provides important opportunities for compatible wildlife-dependent recreational activities involving hunting, fishing, wildlife observation and photography, and environmental education and interpretation.
- **Habitat**—Fish and wildlife will not prosper without quality habitat, and without fish and wildlife, traditional uses of refuges cannot be sustained. The Refuge System will continue to conserve and enhance the quality and diversity of fish and wildlife habitat within refuges.
- **Partnerships**—America’s sportsmen and women were the first partners who insisted on protecting valuable wildlife habitat within wildlife refuges. Conservation partnerships with other Federal agencies, State agencies, tribes, organizations, industry, and the public can make significant contributions to the growth and management of the Refuge System.
- **Public Involvement**—The public should be given a full and open opportunity to participate in decisions about acquisition and management of national wildlife refuges.

A.2 Other Legal and Policy Guidance

Management actions on national wildlife refuges are constrained by many mandates including laws and Executive orders. The more common regulations that affect refuge complex management are listed below.

- American Indian Religious Freedom Act (1978): Directs agencies to consult with native traditional religious leaders to determine appropriate policy changes necessary to protect and preserve Native American religious cultural rights and practices.
- Americans with Disabilities Act (1992): Prohibits discrimination in public accommodations and services.
- Antiquities Act (1906): Authorizes the scientific investigation of antiquities on Federal land and provides penalties for unauthorized removal of objects taken or collected without a permit.
- Archaeological and Historic Preservation Act (1974): Directs the preservation of historic and archaeological data in Federal construction projects.
- Archaeological Resources Protection Act (1979), as amended: Protects materials of archaeological interest from unauthorized removal or destruction and requires Federal managers to develop plans and schedules to locate archaeological resources.
- Architectural Barriers Act (1968): Requires federally owned, leased, or funded buildings and facilities to be accessible to persons with disabilities.
- Bald and Golden Eagle Protection Act (1940): Provides for the protection of the bald eagle (the national emblem) and the golden eagle by prohibiting, except under certain specified conditions, the taking, possession and commerce of such birds.
- Bureau of Reclamation Project Authorization Act (1972): Public Law 92-514 (Closed Basin Project) allowed for furnishing water for operation of Alamosa National Wildlife Refuge.
- Clean Air Act (1970, amended 1990): Restricts the amount of pollutants that can be emitted into the air. Designated wilderness areas including the Great Sand Dunes National Park and Preserve (adjacent to portions of Baca National Wildlife Refuge) have the highest standards (class I) for pollution and visibility.
- Clean Water Act (1977): Requires consultation with the U.S. Army Corps of Engineers (404 permits) for major wetland modifications.
- Closed Based Project (1972): BOR is authorized by Public Law 92-514 (October 20, 1972) to operate and maintain the Closed Basin Project through portion of the San Luis Valley including Alamosa and Baca Refuges for the transport of water into the Rio Grande for the fulfillment of the United States' obligation to Mexico and for furnishing water downstream of Alamosa Refuge for deficient areas of Colorado, New Mexico, and Texas. This is accomplished through direct diversion of water out of the closed basin system.
- Data Quality Act (2001): Requires Government agencies to ensure and maximize the quality, objectivity, utility, and dissemination of information by Federal agencies.
- Dingell-Johnson Act (1950): Authorizes the Secretary of the Interior to provide financial assistance for State Fish restoration and management plans and projects. Financed by excise taxes paid by manufacturers of rods, reels, and other fishing equipment.
- Emergency Wetlands Resources Act (1986): Promotes wetland conservation for the public benefit to help fulfill international obligations in various migratory bird treaties and conventions. The act authorizes buying wetlands with Land and Water Conservation Fund monies.
- Endangered Species Act (1973): Requires Federal agencies to carry out programs for the conservation of endangered and threatened species.
- Enhancement Act (2000): Public Law 106-54 authorized the Secretary of Army, working with the Secretary of Interior, to

- identify cabin sites suitable for conveyance to current lessees. The funds received will be used for acquiring other lands with greater wildlife and other public value for the refuge.
- Executive Order 11988 (1977): Requires Federal agencies to provide leadership and take action to reduce the risk of flood loss, minimize the impact of floods on human safety, and preserve the natural and beneficial values served by the floodplains.
 - Executive Order 12996, Management and General Public Use of the National Wildlife Refuge System (1996): Defines the mission, purpose, and priority public uses of the National Wildlife Refuge System. It also presents four principles to guide management of the Refuge System.
 - Executive Order 13007, Indian Sacred Sites (1996): Directs Federal land management and other agencies to accommodate access to and ceremonial uses of Indian sacred sites by Indian religious practitioners, avoid adversely affecting the physical integrity of such sacred sites and, where appropriate, maintain the confidentiality of sacred sites.
 - Executive Order 13352, Cooperative Conservation (2004): Directs Federal agencies to implement laws relating to the environment and natural resources in a manner that promotes cooperative conservation with an emphasis on appropriate inclusion of local participation in Federal decisionmaking in accordance with respective agency missions and policies.
 - Executive Order 13443, Facilitation of Hunting Heritage and Wildlife Conservation (2007): Directs Federal land management and other agencies to facilitate the expansion and enhancement of hunting opportunities and the management of game species and their habitat.
 - Executive Order 13653, Preparing the United States for the Impacts of Climate Change (2013): Directs Federal Government agencies to build on recent progress and pursue new strategies to improve the Nation's preparedness and resilience in preparing and adapting to climate change.
 - Federal Noxious Weed Act (1990): Requires the use of integrated management systems to control or contain undesirable plant species and an interdisciplinary approach with the cooperation of other Federal and State agencies.
 - Federal Records Act (1950): Requires the preservation of evidence of the Government's organization, functions, policies, decisions, operations, and activities, as well as basic historical and other information.
 - Fish and Wildlife Coordination Act (1958): Allows the U.S. Fish and Wildlife Service to enter into agreements with private landowners for wildlife management purposes.
 - Great Sand Dunes National Park and Preserve Act (2000): Public Law 106-530 was passed by Congress on November 22, 2000. Section 6 of the Act authorized the establishment of Baca National Wildlife Refuge. It also recognized the significant diversity of resources within the Great Sand Dunes ecosystem and changed the park from its national monument status to a national park. The Act was amended in 2009 by Public Law 111-8 to provide purposes for Baca Refuge.
 - Migratory Bird Conservation Act (1929): Establishes procedures for acquisition by purchase, rental, or gifts of areas approved by the Migratory Bird Conservation Commission.
 - Migratory Bird Hunting and Conservation Stamp Act (1934): Authorizes the opening of part of a refuge to waterfowl hunting.
 - Migratory Bird Treaty Act (1918): Designates the protection of migratory birds as a Federal responsibility, and enables the setting of seasons and other regulations including the closing of areas, Federal or non-Federal, to the hunting of migratory birds.
 - Native American Policy (1994): Articulates the general principles that guide the Service's government-to-government relationship to Native American governments in the conservation of fish and wildlife resources.
 - National Environmental Policy Act (1969): Requires all agencies, including the Service,

to examine the environmental impacts of their actions, incorporate environmental information, and use public participation in the planning and implementation of all actions. Federal agencies must integrate this act with other planning requirements, and prepare appropriate documents to facilitate better environmental decisionmaking. [From the Code of Federal Regulations (CFR), 40 CFR 1500]

- National Historic Preservation Act (1966), as amended: Establishes as policy that the Federal Government is to provide leadership in the preservation of the Nation's prehistoric and historical resources.
- National Wildlife Refuge System Administration Act (1966): Defines the National Wildlife Refuge System and authorizes the Secretary of the Interior to permit any use of a refuge, provided such use is compatible with the major purposes for which the refuge was established.
- National Wildlife Refuge System Improvement Act of 1997: Sets the mission and administrative policy for all refuges in the National Wildlife Refuge System; mandates comprehensive conservation planning for all units of the Refuge System.
- Native American Graves Protection and Repatriation Act (1990): Requires Federal agencies and museums to inventory, determine ownership of, and repatriate cultural items under their control or possession.
- Paleontological Resources Preservation Act of 2009: Requires the Secretary of Interior and Agriculture to manage and protect paleontological resources on Federal land using scientific principles and expertise.
- Refuge Recreation Act (1962): Allows the use of refuges for recreation when such uses are compatible with the refuge's primary purposes and when sufficient funds are available to manage the uses.
- Rehabilitation Act (1973): Requires programmatic accessibility in addition to physical accessibility for all facilities and programs funded by the Federal Government to ensure that any person can participate in any program.
- Rivers and Harbors Act (1899): Section 10 of this act requires the authorization of U.S. Army Corps of Engineers before any work in, on, over, or under navigable waters of the United States.
- Sangre de Cristo National Heritage Area (2009): National heritage areas are set aside by Congress. The Sangre de Cristo National Heritage Area was established in Public Law 111-11 on March 30, 2009 for the purposes of providing integrated and cooperative approach for the "protection, enhancement, and interpretation of the natural, cultural, scenic, and recreational resources of the Heritage Area."
- Volunteer and Community Partnership Enhancement Act (1998): Encourages the use of volunteers to help in the management of refuges within the Refuge System; facilitates partnerships between the Refuge System and non-Federal entities to promote public awareness of the resources of the Refuge System and public participation in the conservation of the resources; and encourages donations and other contributions.
- Wilderness Act (1964): The act (Public Law 88-577) [16 U.S.C. 1131-36] defines wilderness as "A wilderness, in contrast with those areas where man and his works dominate the landscape, is hereby recognized as an area where the earth and its community of life are untrammelled by man, where man himself is a visitor who does not remain."

Appendix B

Preparers and Contributors

This document is the result of the extensive, collaborative, and enthusiastic efforts by the members of the planning team, cooperating agencies, and other Service or agency contributors listed below.

U.S. Fish and Wildlife Service Staff Planning Team

<i>Name</i>	<i>Agency and/or Position</i>	<i>Education and Experience</i>	<i>Contributions</i>
Laurie Shannon	Planning Team Leader, Region 6, Lakewood, CO	B.S. Recreation Resources Management 30 years	Project coordination, organization, writing, and review
Sharon Vaughn	Project Leader, San Luis Valley National Wildlife Refuge Complex	B.S. Fisheries and Wildlife Biology 35 years	Project coordination and review
Mike Blenden (Transferred to Regional Office)	Project Leader, San Luis Valley National Wildlife Refuge Complex	B.S. and M.S. Wildlife Management 32 years	Project coordination, organization, writing, and review
Pat Gonzales (Retired)	Deputy Project Leader, San Luis Valley National Wildlife Refuge Complex	B.S. Wildlife Management 33 years	Project coordination, organization, writing and review.
Scott Miller	Wildlife Biologist, San Luis Valley National Wildlife Refuge Complex	B.S. Wildlife Ecology M.S. Wildlife Biology 17 years	Writing and reviewing
Suzanne Beauchanne	Alamosa and Monte Vista Refuge Manager	B.S. Wildlife Ecology 24 years	Writing and reviewing
Ron Garcia	Baca Refuge Manager	B.S. Field Biology 26 years	Writing and reviewing
Corinna Hanson	Deputy Refuge Manager, Baca Refuge	B.S. Criminal Justice M.S. Wildlife Ecology 5 years	Writing and reviewing
Dean Lee	Biological Technician, San Luis Valley National Wildlife Refuge Complex	B.A. Wildlife Biology 15 years	Alternative and biological objectives development, review
Jackie Hensley	Budget Administration, San Luis Valley National Wildlife Refuge Complex	Budget Specialist 32 years	Assistance with budget analysis
Lee Ann Duran	Administrative Support, San Luis Valley National Wildlife Refuge Complex	Generalist; Administrative Assistant 4 years	Assistance with project coordination
Barbara Boyle	Refuge Supervisor, Colorado, Kansas, Nebraska	B.S. Zoology 28 years	Project overview
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U.S. Fish and Wildlife Service Staff Planning Team

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Meg Van Ness	Regional Historic Preservation Officer	B.A. Anthropology and Archaeology M.A. Anthropology and Archaeology 40 years	Alternative and objective development, writing and review
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Cooperating Agency Members

The Cooperating Agency Members Role: Primary representative(s) of respective agencies at meetings; participated in planning team meetings; helped identify issues; provided input on alternative approaches and objectives and strategies; reviewed draft planning documents and provided information as requested.

<i>Name</i>	<i>Agency and/or Position</i>
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Other Service or Agency Contributors

<i>Name</i>	<i>Agency and/or Position</i>	<i>Contributions</i>
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Linda Moeder	Region 6 Division of Refuge Planning, GIS Specialist, Lakewood, CO	Prepared GIS maps for document
Melvie Uhland	Outdoor Recreation Planner, Division of Visitor Education and Services, Lakewood Colorado	Assistance with developing public use objectives and overview of visitor services
Deb Parker	Region 6 Writer and Editor, Lakewood, CO	Editing, layout of documents
Mitch Werner	Region 6 Writer and Editor, Lakewood, CO	Editing, layout of documents
David Lucas	Chief, Division of Refuge Planning, Lakewood, CO	Planning guidance
Mike Dixon	Land Protection Planner, Region 6 Division of Refuge Planning	Lead planner for Sangre de Cristo Conservation Area, San Luis Valley Conservation Area

Consultants

<i>Name</i>	<i>Agency and/or Position</i>	<i>Education</i>	<i>Contributions</i>
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Ian Scott	Roothouse Studio		Assistance in facilitation of public use objectives workshop
Bill Mangle	ERO Resources, Natural Resources Planner, Denver, CO	B.S. History/Political Science M.S. Natural Resources Policy Planning	Assistance with analysis and research for reasonably foreseeable activities and cumulative impacts, and other NEPA documentation
Lynne Koontz	USGS, Ft. Collins Science Center		Regional economic profile, analysis of socioeconomic impacts
Elizabeth Myrick	Economist, USGS, Fort Collins Science Center, Colorado		Regional economic profile, analysis of socioeconomic impacts
Kathryn McDonald	North State Resources, Managing Editor, Redding, California	B.A. English	Editing, planning updates and CCP and EIS
Brooke McDonald	North State Resources, Editor, Redding, California	B.S. Soil Science	Editing, planning updates and CCP and EIS

Individuals and Groups

<i>Name</i>	<i>Position and/or Agency</i>
<i>Many other individuals also provided invaluable assistance with the preparation of this CCP. The Service acknowledges the efforts of the following individuals and groups toward the completion of this plan. The diversity, talent, and knowledge contributed dramatically improved the vision and completeness of this document.</i>	
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Appendix C

Public Involvement

Following the guidance found in NEPA, the Improvement Act, and our planning policies, we have made sure that all interested groups and the public have had an opportunity to be involved in the planning process. This appendix outlines our outreach efforts during the development of the CCP and EIS.

C.1 Public Scoping Activities

A notice of intent to develop a CCP and a request for comments was published in the Federal Register on March 11, 2011(76 FR Doc. 2011-5924) (FWS 2011h). The notice of intent notified the public of our intent to begin the CCP and EIS process.

Public Outreach

Early in the preplanning phase, the Service identified a process that would be inclusive of many interests and would involve a range of activities for keeping the public informed and ensure meaningful public input. To date, the Service used various methods to solicit guidance and feedback from interested citizens, organizations, and government agencies. These methods have included outreach materials, public scoping meetings, agency meetings (planning team), briefings and presentations, as well as letters, email and telephone calls.

Planning Updates

A Planning Update was mailed to about 300 persons and businesses during the period leading up to the public meetings, and most updates were mailed in mid-March 2011 (FWS 2011h). The planning update and an earlier piece titled Planning Process Summary (FWS 2011g), outlined the planning process, the draft vision and goals for the refuge, and the dates, times and locations of the public scoping meetings. Information contained in the Planning Update was announced at local agency meetings

(FWS2011h). The Planning Update distribution list consisted of individuals, agencies, and organizations who previously expressed an interest in refuge activities (FWS2011h).

Press Release

A press release announcing the planning process and notifying the public of the schedule and location of the public meetings was sent to nearly 857 media organizations throughout Colorado including congressional offices, other Federal and State agency offices, and tribal agencies. A number of news articles about the planning process appeared in a number of newspapers, radio, TV and online publications prior to the meetings. Additionally, the project leader gave a 20-minute taped radio interview with KSLV in Monte Vista, CO that aired on April 16, 2011 and another 20-minute live interview with KRZA which aired twice on April 19, 2011.

Project Web Site

The project's planning web site <http://www.fws.gov/mountain-prairie/planning/ccp/co/alm_bac_mtv/alm_bac_mtv.html> was established in early March 2011. The site provides information about the public scoping meetings, as well as downloadable versions of all of the available public scoping documents. An example of the web site is included in the scoping report (FWS 2011h). All interested parties can sign up to be on the project mailing list or can provide public comment through the Web site for Region 6.

Public Scoping Meetings

The three public scoping meetings (March 29-31, 2011) were a major component of the public scoping process. The purpose of these meetings was to solicit public concerns and planning ideas that will be considered in the CCP and EIS. Meetings were held at

three locations—Alamosa, Monte Vista, and Crestone.

Following a brief welcome and introduction, Service staff made a 15-minute presentation that outlined the following points:

- Description of the Service and the purpose of the Refuge System
- CCP and EIS process
- Project schedule
- Draft Vision and goals
- Proposed San Luis Valley Conservation Area and LPP

Following the presentation, the remainder of the meeting was broken up into two components, questions and answers and public comments. During the question and answer session, the facilitator took all the audience's questions. In turn, we answered all the questions. Most of the meeting time was spent in the question and answer session. After all the questions were answered, we took comments from those who wanted to offer them. This format enabled participants to have their questions and concerns answered about the planning process and also identified many of the important issues.

Other Briefings

We have briefed or given a presentation to a number of entities that have included county commissioners from the affected governments, the Rio Grande Water Conservation District, and others.

For the President's America's Great Outdoor initiative, we have met with a wide array of local ranchers and stakeholders, county commissioners, State representatives, and other Federal agencies to talk about landscape conservation in the San Luis valley.

C.2 Agency and Tribal Coordination

In accordance with the Service's planning policy, the preplanning and scoping process began with formal notification to Native American tribes and other Federal and State agencies with a land management interest and inviting them to participate as cooperating agencies and members of the planning team.

Native American Tribes

We sent letters of notification about the planning process including an invitation to participate on 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. We are continuing to work with interested tribes who are interested in the planning process.

Federal, State, and Local Agencies

We sent letters of notification about the planning process including an invitation to participate on the planning team to the following agencies: NPS, BLM and USFS (San Juan Public Lands Office), NRCS, and CPW. Subsequently, we met and briefed the six counties within the refuge boundaries about the planning process including the proposed San Luis Valley Conservation Area. The counties include: Alamosa, Rio Grande, Saguache, Conejos, Costilla, and Mineral counties.

Cooperating Agencies

Following notification to Native American tribes and Federal, State, and local agencies, the following agencies have participated as cooperating agencies in the development of the draft CCP and EIS: Bureau of Land Management (BLM) and the Forest Service (USFS) (both agencies are part of the San Juan Public Lands Center), National Park Service (NPS), Natural Resources Conservation Service (NRCS), Colorado Parks and Wildlife (CPW), and the Colorado Division of Water Resources. They have provided input on vision and goal, alternatives development, objectives development, and internal review of the draft CCP and EIS. We have greatly valued the input that we have received from the cooperating agencies in guiding the development of the draft CCP and EIS.

C.3 Scoping Results

The following summarizes the methods for comment collection and analysis, the number and source of comments received and a summary of the comments. The planning team collected comments, questions and concerns about the future of the refuge through public meetings, letters, email, and other methods as described in the public scoping activities above.

Methods for Comment Collection and Analysis

The objective of the scoping process is to gather the full range of comments, questions and concerns that the public has about management of the refuge or the planning process. All comments, questions, or issues, whether from written submissions or recorded at the public meetings were organized by topic into a spreadsheet and coded for organizational purposes. Every effort was made to document all issues, questions, and concerns. Regardless of whether comments and questions were general in nature or about specific points of concern, they were added to the spreadsheet one time.

We provided optional questions to the public that included the following:

- What suggestions do you have for managing migratory birds on the refuges in the face of climate change and declining precipitation?
- What ideas do you have regarding visitor services and wildlife-dependent public uses on the refuges, particularly Baca National Wildlife Refuge which is currently closed to any public use?
- What changes, if any, would you like to see in the management of the Alamosa and Monte Vista National Wildlife Refuges?
- What concerns do you have regarding the additional protection of wildlife and wetland habitat in the San Luis Valley? Can the use of conservation easements protect important wildlife resources in the valley?
- What concerns do you have regarding ungulate management on the refuges or reintroduction of species such as the American bison?

All comments received from individuals on Service NEPA documents become part of the official public record. Requests for information contained in comments are handled in accordance with the Freedom of Information Act, NEPA (40 CFR 1506.6 (f)) and other Department of Interior and Service policies and procedures.

Summary of the Scoping Comments

During the initial scoping process, we received input on a wide array of topics and subtopics. Comments were submitted in writing and/or offered at the public meetings held in March 2011 in Alamosa, Monte Vista, and Moffat, Colorado.

Fifty-two people attended the three public meetings with the largest audience at the meeting in Moffat where about 33 people attended (10 at Alamosa and 9 at Monte Vista). Additionally, about 14 organizations and citizens provided written comments. Agency or organizations included the Environmental Protection Agency, Defenders of Wildlife, TNC, Lexam, and their legal firm.

Subsequently, we identified seven significant issues or topics to address (refer to chapter 1, section 1.7):

- Habitat and Wildlife Management
- Water Resources
- Landscape Conservation and Protection
- Visitor Services
- Partnerships and Operations
- Cultural Resources and Tribal Coordination
- Research, Science and Protection of the Physical Environment

C.4 Development of Draft Alternatives

We consider alternatives development as part of an iterative process in the development of a draft CCP and EIS, meaning it continues to evolve. This phase of the project began in the fall of 2011. The core planning team developed four approaches to managing the refuge complex. This included three action alternatives including a proposed action and the no-action alternative. Each of the draft alternatives presented a different approach for future management with a varied focus on wildlife and habitat man-

agement and visitor services. Following further input from other Service staff and our cooperating agencies, we sought further input from the public during three workshops that we held from January 23-25, 2012. Similar to the initial scoping meetings, we mailed out a planning update and put out a press release. Forty-one people attended these workshops held in Alamosa, Monte Vista, and Moffat, Colorado. We also received several hundred written comments from individuals and stakeholder groups. This input shaped further development and refinement of the alternatives.

C.5 Release of 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. We allowed comments to be submitted until November 3, 2014.

Outreach Activities

A planning update (Issue 3, August 2014) was mailed to everyone on the project mailing list in addition to requests that we received following publication. A press release was also used to announce the availability of the document. We also briefed the county commissioners for Alamosa, Saguache, and Del Norte counties and provided briefings to the Friends of the San Luis Valley Refuges and to Colorado Parks and Wildlife, Colorado Parks and Wildlife Commission, several of the local habitat protection planning groups in the San Luis Valley, and the SLV interagency Native American Graves Protection and Repatriation Group.

We held three public meetings on the draft CCP and EIS in Alamosa (September 29), Monte Vista (September 30), and Moffat (October 1). In total, about 35 people attended the meetings. We began the meetings with a short presentation, followed by an opportunity for participants to ask questions, and finally an opportunity for anyone who wished to offer a formal comment. Comment sheets were available for anyone who preferred to submit comments in writing. Throughout the comment period, we received comments from tribes, Federal agencies, State agencies, non-profit organizations, and individuals. Refer to the responses to comments section of this final CCP and EIS for more information on the comments we received.

C.6 Significant Changes to the Final CCP and EIS

As a result of public comments on the draft CCP and EIS, we made several significant changes or clarifications in the final CCP and EIS.

On Alamosa Refuge, under alternative B, we would provide for fishing access along the banks of the river just above and below the Chicago dam (fishing from the dam would not be allowed). This was an element that was only considered under alternative D in the draft CCP and EIS, providing that anglers did not fish from the dam. Prior to our acquisition of the Lillpop property near the Chicago dam, the area was popular with local anglers who fished for game fish like northern pike and carp. When we acquired the property, we closed the access due to concerns of having people fishing off the dam. After further review, we believe under alternative B or D, we can use barriers, increased law enforcement patrols, or other tools to keep people off the dam. We would allow for bank fishing just above and below the dam. Currently, there are no nesting territories for southwestern willow flycatcher found in this area, but monitoring for the birds would continue. Should territories be established in the area, we would institute seasonal closures as needed. Fishing is one of six priority public uses identified in the Improvement Act. Additional fishing opportunities could be considered in the future.

In providing this opportunity, we think it provides a great way to encourage youths and others to come out and experience and learn about the refuge.

For Baca Refuge, we modified several trails under alternative B and D to provide for some shorter loops and longer loops. We also made several other modifications to the maps to provide additional clarity about how the public use program would be managed on the refuge.

There seemed to be confusion about opening Alamosa and Monte Vista Refuge for limited big game hunting and Baca Refuge for limited small game and big game hunting under alternatives B, C, and D, and we have attempted to make it clearer. Under alternatives B, C, and D we would develop and implement a hunting plan within 1-3 years. There are a number of steps that we have to complete before we can publish new hunting regulations in the Federal Register, and we have identified these steps. There are nuanced differences between the alternatives for full implementation of the hunting program. For example, under alternative B, we would be emphasizing opportunities for a quality experience and implementing a youth mentoring program, whereas under alternative D, we also want to maximize opportunities.

Under cultural resources, we added information about the importance of oral traditions.

We also added two new figures to the document 1) Impaired waters in the San Luis Valley; and 2) the migration route for the greater sandhill cranes.

C.7 List of Entities Receiving the Final CCP and EIS

The following Federal and State agencies, tribes, and nonprofit organizations received copies of the Final CCP and EIS. Other interested groups and members of the public who were on our mailing list received a copy of Planning Update, Issue 4, which summarized the contents of the Final CCP and EIS.

Federal Elected Officials

- U.S. House of Representatives, Colorado Representative Scott Tipton
- U.S. Senate, Colorado Senator Cory Gardner
- U.S. Senate, Colorado Senator Michael Bennet

Federal Agencies

- Bureau of Land Management, San Luis Valley Field Office, Saguache, Colorado
- Bureau of Reclamation, Alamosa, Colorado
- Environmental Protection Agency, Region 8, Denver, Colorado
- National Park Service, Mosca, Colorado
- Natural Resources Conservation Service, Alamosa and Center, Colorado
- U.S. Forest Service, Rio Grande National Forest, Monte Vista Colorado
- USGS, Fort Collins, Colorado

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, Espanola, NM
- Pueblo of Taos, Taos, NM
- Pueblo of Zuni, Zuni, NM
- Pueblo of Santa Ana, Santa Ana Pueblo, NM
- Southern Ute Tribe, Ignacio, CO
- Uintah and Ouray Ute Indian Tribe, Fort Duchesne, UT
- Ute Mountain Ute Tribe, Towaoc, CO

Colorado Elected Officials

- John Hickenlooper, Governor, Denver, CO
- Representative Edward Vigil, Denver, CO (District 62)
- Senator Larry Crowder, State Senator, Denver, CO (District 35)

Colorado State Agencies

- Colorado Department of Natural Resources
- Colorado Division of Water Resources, Division 3, Alamosa, CO
- Colorado Parks and Wildlife, Monte Vista, CO
- Colorado State Historic Preservation Office (History Colorado)

Local Governments

- County Commissioner Alamosa County, Alamosa, CO
- County Commissioner, Conejos County, Conejos, CO
- County Commissioner, Costilla County, San Luis, CO
- County Commissioner, Mineral County, Creede, CO
- County Commissioner, Rio Grande County, Del Norte, CO
- County Commissioner, Saguache, CO
- Mayor, Alamosa, CO
- Mayor, Monte Vista, CO

- Mayor, Saguache, CO
- Rio Grande Water Conservation District, Alamosa, CO
- Town of Crestone, Crestone, CO
- Del Norte Town Government, Del Norte, CO

Public Libraries

- Alamosa Public Library, Alamosa, CO
- Carnegie Public Library, Monte Vista, CO
- Baca Grande Library, Crestone, CO
- Saguache Public Library, Saguache, CO
- Colorado State University Morgan Library, Fort Collins, CO
- U.S. Fish and Wildlife Service, National Conservation Training Center Library, Shepherdstown, West Virginia

Organizations

- Baca Grande Property Owners Association, Crestone, CO
- Colorado Open Lands, Lakewood, CO
- Crestone Baca Land Trust, Crestone, CO
- Crestone Creative Council, Crestone, CO
- Defenders of Wildlife, Denver, CO
- Friends of the San Luis Valley National Wildlife Refuges, CO
- Mount Blanca Habitat Partnership Program: San Luis Valley Habitat Partnership Program
- Rio Grande Headwaters Land Trust, Del Norte, CO
- San Luis Valley Ecosystem Council, Crestone, CO
- The Nature Conservancy, Boulder, CO
- Wilderness Society, Colorado headquarters, Denver, CO

Appendix D

Compatibility Determinations

D.1 Uses

We have developed compatibility determinations for the following existing and proposed uses. As per our planning policy, we provide these compatibility determinations in our CCP and EIS as part of the public review. These compatibility determinations only apply to the preferred alternative. Refer to chapter 1, section 1.2 for more information on compatible refuge uses.

- Hunting
- Fishing
- Wildlife observation, photography, environmental education, and interpretation
- Commercial photography
- Prescribed grazing and haying
- Cooperative farming (Monte Vista National Wildlife Refuge)
- Research

D.2 Refuge Names

The San Luis Valley National Wildlife Refuge Complex (refuge complex) consists of three national wildlife refuges:

- Monte Vista National Wildlife Refuge
- Alamosa National Wildlife Refuge
- Baca National Wildlife Refuge

D.3 Establishing and Acquisition Authorities

The following laws and Executive orders established the refuges and authorized acquisition of refuge lands.

Monte Vista National Wildlife Refuge

- Establishing authority: Migratory Bird Conservation Act of 1929
- Approved for acquisition on June 10, 1952, by the Migratory Bird Conservation Commission
- Public Land Order 2204 dated September 1960

Alamosa National Wildlife Refuge

- Establishing authority: Migratory Bird Conservation Act of 1929
- Approved for acquisition on June 27, 1962, by the Migratory Bird Conservation Commission
- Public Land Order 3899 dated December 1965

Baca National Wildlife Refuge

- Establishing authority: Great Sand Dunes National Park and Preserve Act of 2000 (Public Law 106-530, November 22, 2000)
- Established on April 8, 2003, with transfer of 3,315 acres from BOR

D.4 Refuge Purposes

Monte Vista and Alamosa National Wildlife Refuges

The Monte Vista and Alamosa National Wildlife Refuges (refuges) were established “for use as an inviolate sanctuary, or for any other management purposes, for migratory birds” (16 U.S.C. § 715d (Migratory Bird Conservation Act)).

Baca National Wildlife Refuge

The Baca Refuge was established “to restore, enhance, and maintain wetland, upland, riparian, and other habitats for native wildlife, plant, and fish species in the San Luis Valley” (Omnibus Appropriations Act, 2009, H.R. 1105).

National Wildlife Refuge System Mission

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.”

D.5 Description of Use

Hunting

The refuge complex proposes to continue to provide safe and sustainable waterfowl and limited small game hunting opportunities within designated areas of the Alamosa and Monte Vista Refuges. In addition, we propose to expand big game hunting opportunities on the Alamosa and Monte Vista Refuges and

open the Baca Refuge to both big and limited small game hunting.

Under the authority of the National Wildlife Refuge Administration Act, the Secretary of the Interior can authorize hunting on any unit of the National Wildlife Refuge System (Refuge System) as long as it is compatible with the purposes for which the refuge was established. This act also allows waterfowl hunting on up to 40 percent of land acquired under the Migratory Bird Conservation Act that would otherwise be considered “inviolate sanctuary.” Both the Alamosa and Monte Vista Refuges were acquired with funds generated from the sale of Migratory Bird Hunting and Conservation Stamps (“Duck Stamps”). Consequently, portions of both refuges are open to waterfowl hunting in compliance with all applicable State and Federal laws. In addition to waterfowl hunting, hunting for pheasant, cottontail, and jack-rabbit is permitted during established waterfowl hunting seasons within the areas of each refuge designated for waterfowl hunting.

For all practical purposes, elk were not present on the Alamosa and Monte Vista Refuges during the first 40 years after the establishment of the refuges. It was not until the mid-1990s that elk starting using Monte Vista Refuge in noticeable numbers. During the late 1990s, elk started using the Alamosa Refuge. Elk hunting has never been opened to the public on either of these refuges.

As a consequence of the change in elk distribution and abundance on the Alamosa and Monte Vista Refuges, we are proposing some elk hunting on both refuges. The CCP provides the first opportunity in the history of the Baca Refuge to consider making refuge hunting opportunities available to the public. We propose opening limited small game hunting, as defined by Colorado hunting regulations, in the southwest and northwest portions of the refuge (figure 18) and an elk archery season both along and to the north of Crestone Creek. Additional elk hunting opportunities would be made available.

On all three refuges, we propose working with CPW to conduct dispersal hunts to redistribute concentrations of elk that are excessively damaging refuge resources or private property or that are presenting unusual hazards on nearby public roads. These hunts would use licensed hunters to eliminate stubborn management conflicts when all conventional efforts have failed. Hunters would be accompanied by agency personnel and instructed about which animals to take to meet management objectives.

Availability of Resources

We currently have a full-time law enforcement officer and two collateral duty officers to help admin-

ister the hunting program. Additionally, law enforcement assistance would continue to be provided by CPW.

Anticipated Impacts of Use

As with all hunting programs that use firearms, human safety and the potential for property damage are important considerations. Hunters, other refuge users, and refuge staff are exposed to potential hazards whenever firearms are present. Damage and theft of cultural resources are potential impacts whenever people, including hunters, are in areas with these resources. Harvest of individual animals can have negative impacts on larger populations if sustainable harvest practices are not used. Hunting activity in one area of a refuge often causes animals to move to other portions of the refuge or to neighboring private or public lands. In developing a sustainable waterfowl hunting program, we must consider the response of waterfowl to hunting, and we often maintain areas that are closed to hunting along with areas where hunting is allowed.

Determination

Hunting, including big game, waterfowl, and limited small game hunting, is a compatible use of the Alamosa, Baca, and Monte Vista Refuges.

Stipulations Necessary To Ensure Compatibility

- Work with CPW to develop a refuge complex hunting plan which would provide for the continuation of waterfowl hunting and limited small game on Monte Vista and Alamosa Refuges and opening them to limited big game hunting, and open Baca Refuge to limited small game hunting and big game hunting. Following publication of new hunting regulations in the Federal Register, begin implementation of the hunting plan.
- Plans for specific hunting programs would ensure reasonable human safety by maintaining hunter densities at or below reasonable levels, providing information to hunters regarding the areas they are hunting in and associated conditions, and maintaining law enforcement and staff presence to enable response to emergencies and provide information in the field.

- Plans for specific hunting programs would exclude areas from hunting activity if there is a substantial risk of property damage from firearm discharge.
- Illegal activities, including hunting violations and removal of cultural artifacts, would be minimized by providing well thought-out information and sufficient law enforcement presence.
- All hunting programs would consider population objectives. Waterfowl hunting would follow seasons and bag limits provided by CPW.
- Plans for specific programs would include objectives for elk distribution. In some cases, discouraging elk use of some parts of a refuge may be a major objective of the hunt. In other cases, it would be desirable to prevent movement of elk off a refuge onto the adjoining Great Sand Dunes National Park and Preserve or private lands.
- All hunting programs would be coordinated with CPW.
- The refuge manager would have the ability to close or modify entire hunting programs, including access, timing, and methods, in response to unforeseen conditions in order to ensure public safety and best management of natural resources.
- Refuge staff would regularly solicit feedback from hunters regarding safety, the overall quality of their hunting experiences, and any suggestions they may have.

Justification

Within the refuge complex, expansion of the current hunting program would provide diverse and quality hunting opportunities for waterfowl, big game, and limited small game hunting, as defined in the Service's guidelines for wildlife-dependent recreation (FWS 2006). Under this policy, providing quality experiences is highlighted as an important component of a hunting program (605 FW1, 605 FW2). Promoting safety, providing reasonable opportunities for success, and working collaboratively with the State wildlife agencies are just a few of the key elements that should be considered in providing for quality experiences. For example, a quality experience could mean that participants could expect reasonable harvest opportunities, uncrowded conditions,

few conflicts between hunters, relatively undisturbed wildlife, and limited interference from, or dependence on, mechanized aspects of the sport.

Hunting has long been an important cultural and social component of the lands that make up the refuge complex. About 800 to 1,000 hunters visit the Alamosa and Monte Vista Refuges each year, and these refuges would continue to provide for quality and diverse hunting experiences. The opening of the Baca Refuge would provide welcome hunting opportunities for many hunters. On all three refuges, elk hunting is a badly needed tool which would improve the ability of refuge managers to influence the distribution of elk on the refuges and assist CPW in achieving population objectives.

Mandatory 15-year reevaluation date: 2030

Fishing

Throughout most of the history of Monte Vista Refuge, the Service has hosted an annual “Kids Fishing Day.” Over the years, the event has had several participating partners. Since 2000, it has been sponsored by the Friends of the San Luis Valley National Wildlife Refuges (Friends group). This event is scheduled to occur on a Saturday in June close to or during National Fishing Week, with the objective of introducing youth to fishing and wildlife-dependent activities while providing environmental education regarding cold-water fisheries and national wildlife refuges.

Kids Fishing Day is conducted at a shallow, two-acre pond that is a remnant of a fish hatchery that operated before the refuge was acquired. Typically, the pond is filled with water from an adjoining well several weeks in advance. Approximately 1 week prior to the event, approximately 1,000 fish donated from the Hotchkiss National Fish Hatchery are introduced into the pond. Public service announcements and fliers posted in local communities indicate required adult supervision, announce a free lunch, and describe the educational displays or presentations, which vary from year to year depending on the availability of presenters and cooperators. Volunteers and refuge staff are present to assist young anglers when needed and to ensure public safety.

Other service organizations including a private, non-profit mental health agency, and a number of retirement and assisted living facilities are then allowed to bring groups to the pond after the Kids Fishing Day event to take advantage of any remaining angling opportunities in the safe and accessible environment. This event also provides additional

opportunities for appreciation of wildlife-dependent recreation to an underserved segment of the public.

On Alamosa Refuge, prior to our acquisition of the property near the Chicago Dam, local citizens would access the area to fish for game fish (northern pike and carp). We closed the access down due to safety concerns about people walking across the dam or fishing off the dam. There has been long-time desire voiced by the public to reopen this area. In consideration of the interest in allowing for fishing on Alamosa Refuge along the Rio Grande, we would allow for bank fishing in a designated area just above and below the dam while keeping the dam off limits to fishing. Additional areas could be considered in the future.

Availability of Resources

Kids Fishing Day does not require a large amount of refuge resources. The fish are donated and delivered by the Hotchkiss National Fish Hatchery. Organization and execution of the event is largely conducted by the Friends group with help from varying partners. The largest refuge expense is the electricity used to pump water when surface water is unavailable.

Allowing for fishing below the Chicago dam is not anticipated to require a large amount of refuge resources. However, it will require law enforcement patrols of the area to ensure people are not fishing outside the designated area for fishing, including fishing from the dam. Signs and other information would need to be distributed informing the public where legal fishing is allowed. The area is already monitored for presence of southwestern willow flycatcher territories and this area would continue to be monitored for flycatcher activity.

Anticipated Impacts of Use

All water used for this event and not lost to evaporation goes into the Spring Creek system of the Monte Vista Refuge, which then provides some benefit to wetlands. About 5 acres of short emergent wetland habitat could be maintained if this same amount of water was directly used for that purpose.

Allowing for limited bank fishing could result in fishing trails and trampled vegetation developing along the bank where fishing is allowed. There would also be disturbance to wildlife. Designating the bank area and fishing trails along with signage would help to limit trampling and impacts. There would be increased trash in the area or violations of other refuge regulations. A corresponding increase in law enforcement resources would be required to ensure public safety. The use of volunteers could assist in providing information, helping to pick up trash, and

communicating pertinent information to refuge staff. The establishment of a local angler's group could also provide a way to communicate with fishermen and get more compliance in adherence to refuge regulations.

Determination

Conducting the Kids Fishing Day event is a compatible use of Monte Vista Refuge. Allowing for limited fishing access below the Chicago dam on Alamosa Refuge is a compatible use of the refuge.

Stipulations Necessary To Ensure Compatibility

Stipulations required include:

- the event continues to be well supported by the Friends of the San Luis Valley National Wildlife Refuges and other partners
- reliance on groundwater for this event is minimized by maintaining the pond for as short a period as possible while allowing harvest of most of the fish and providing the greatest angling opportunity
- fish continue to be donated from the Hotchkiss National Fish Hatchery or equivalent
- fish remaining in the pond are donated to CPW for placement in other approved fisheries such as nearby Homelake State Wildlife Area
- All fisherman must stay off the dam area and adhere to all other closures;
- Waders would be allowed, but floating would be prohibited;
- Fisherman must use designated access areas and not create new trails;
- Fishermen must adhere to all State fishing regulations and refuge regulations including but limited to: possession of a State license, hours of use, and use of bait.
- All trash must be packed out.
- If nesting territories for southwestern willow flycatcher become established in the area, other seasonal closures would need to be established and enforced.

Justification

Fishing is one of the wildlife-dependent recreational activities that is encouraged on national wildlife refuges and is a fundamental strategy in the Service's "Connecting People with Nature" effort. Although Kids Fishing Day is provided in a somewhat artificial setting, it is a very popular and accessible opportunity in a community that otherwise must drive extensive distances for similar experiences, which may not be possible for youth from lower-income families. The cost of conducting this small, short-term event is well worth the benefit to the community and achieving Refuge System goals.

Allowing for limited fishing access just above and below the Chicago dam provides for a fishing opportunity on Alamosa Refuge which has been long supported in the local community. The impacts and costs of allowing for this wildlife-dependent activity would be offset by the benefit of having more local citizen participation, including youths and minority groups, in refuge activities.

Mandatory 15-year reevaluation date: 2030

Wildlife Observation, Photography, Interpretation, and Environmental Education

The Improvement Act identified six wildlife-dependent recreational activities as priority public uses and encouraged their implementation on refuges when they are found compatible with refuge purposes and when adequate resources are available to manage these activities on refuge lands. This compatibility determination considers wildlife observation, wildlife interpretation, environmental education, and wildlife photography. The compatibility of the other two activities identified in the Act, hunting and fishing, are assessed above.

Compatible access for priority public uses would be improved on the Monte Vista and Alamosa Refuges and established on the Baca Refuge. On the Monte Vista and Alamosa Refuges, we would allow more access for viewing and interpretation on a seasonal basis from about mid-July to the end of February. Modes of access that facilitate wildlife-dependent uses—walking, cross-country skiing and bicycling—would be considered on all three refuges. Portions of the Baca Refuge would be seasonally opened for all public uses except fishing. An auto tour route would be built on the Baca Refuge. Additional trails or viewing platforms could be considered to enhance viewing opportunities. Lim-

ited commercial opportunities such as photography could be considered. We would seek funding to build a visitor center and refuge complex staff offices at either Monte Vista or Alamosa Refuge to better serve the public, provide for safer access to our offices, and create a more efficient work environment for our employees.

On the Alamosa Refuge, we would:

- extend the auto tour route to the east to connect with the Bluff Road; improve the accessibility of the Rio Grande nature trail and enhance the experience by providing better seating, shelter, and interpretation for visitors; seasonally open about 7.3 additional miles of existing trails and administrative roads for wildlife viewing and photography access (foot, bicycle, cross country ski) currently available only to hunters during the hunting season; and open about 6.4 additional miles of nature trails, including a trail link to town and an extension of Bluff Nature Trail to parking lot 4
- work with partners to develop a trail from the town of Alamosa to the Alamosa Refuge
- repurpose the existing contact station and visitor center at the Alamosa Refuge to focus on environmental education and administrative needs

On the Baca Refuge, we would:

- develop auto tour routes and install wayside interpretive panels along these routes. Auto tour routes would provide seasonal access and allow visitors to experience different habitats on the refuge. These routes would be accessible from Colorado Highway 17 and Saguache County Road T.
- develop a looped interpretive trail around the refuge's headquarters area (old Baca Ranch) with several interpretive panels or other interpretive media positioned along the trail route
- develop a nature trail from the refuge office to the sandy bluff and windmill above the office, as well as a trail through the pinion unit uplands with access from the Baca Grande subdivision. This trail would accommodate horse traffic as well as foot traffic

- develop two nature trails originating from the historic Cottonwood Cow Camp, where there would also be a picnic spot with table(s) and a vault toilet
- develop two picnic spots (without toilets) at the refuge headquarters and one at the historic Sheds Cow Camp
- develop three elevated wildlife viewing areas along the auto tour routes and along the Baca Grande subdivision access road
- develop seven seasonal access parking areas along the western boundary of the refuge
- develop a pullout with an informational kiosk along Saguache County Road T
- provide a refuge office and visitor center and work with agency partners, Friends group, and others to staff and provide orientation and interpretation for natural and cultural resources throughout the San Luis Valley. This office and visitor center would also house impressive archeological collections and provide opportunities for the public to view and learn about these artifacts.
- seasonally open portions of the refuge to big game hunting and other wildlife-dependent uses, with all using non-motorized forms of access during normal elk hunting seasons
- open proposed big game hunting areas to all non-motorized forms of access during the elk season

On the Monte Vista Refuge we would:

- improve the accessibility of the Meadowlark Nature Trail and add a viewing blind; replace information kiosks at three parking areas; develop visitor facilities around Parker Pond, including an accessible parking area and trailhead, viewing blind, trail, and observation platform; develop one crane observation pull-off and parking along Rio Grande County Road 6 South; and replace signs at existing crane observation pull-offs.
- work with partners to develop a trail from the town of Monte Vista to the Monte Vista Refuge
- work with BLM and Rio Grande County to develop a trailhead on Rio Grande County

Road 6 South to provide non-motorized access to BLM land

On all three refuges we would:

- construct additional recreational vehicle pads for volunteers

Availability of Resources

We would mostly use existing funding and staffing to implement some of the projects that only require opening an administrative road to non-motorized access or extending an auto tour route along existing roads. Most of these projects would potentially be funded through traditional appropriated funds as they become available. Their availability depends on annual appropriations and on the degree to which refuge staff succeed in competing for any of the Service's flexible funding opportunities. Additionally, the generation of outside funding, "in-kind" assistance from partners, especially the Friends group, would also be used.

Once implemented, these projects would result in a significant increase in visitor use at all three refuges, placing a significant demand on refuge maintenance and law enforcement programs. Additional positions and maintenance funds required to sustain these projects are identified in the CCP.

Anticipated Impacts of Use

Projects on all three refuges could have the following impacts:

- On the Alamosa Refuge, additional wildlife disturbance could occur from extension of the auto tour route, opening areas for non-motorized access, expansion of wildlife viewing nature trails, and providing a trail link from the town of Alamosa to the refuge.
- On all three refuges, the proposed projects would increase human presence in both time and space. There is inter- and intra-specific variation within and among wildlife species since some species, especially habitat specialists, are more susceptible than others to human disturbance, especially habitat generalists. Research has shown that human presence associated with roads and trails can result in a simplification of avian communities (fewer specialists and more generalists), reduced nest success, and reduced

habitat quality. Many species are more likely to flush with increased human presence, resulting in less time spent foraging, which can affect building suitable energy reserves for egg laying and migration, reduced food delivery rates to young, territory establishment and defense, and mate attraction. For many species, especially medium-sized and large mammals, the presence of dogs can greatly magnify the effects of disturbance. Research has shown that various activities result in differing levels of disturbance. Pedestrian and bicycle use results in greater disturbance than vehicle use. Trails and roads create habitat edges, which lead to increased predation, cowbird parasitism, and displacement of interior-sensitive birds. Trails and roads can restrict animal movement and dispersal. A corresponding increase in law enforcement resources would be required to ensure public safety.

- On the Alamosa Refuge, repurposing the visitor center and contact station would result in more use of the facility.
- On the Baca Refuge, the development of the auto tour routes and trails would result in increased disturbance to migratory birds, elk, pronghorn, and mule deer. Additionally, large movements of amphibians, primarily Great Plains toad, have occurred under some environmental conditions on the Baca Refuge. During these mass movements, it is impossible to avoid direct mortality from vehicles.
- On the Baca Refuge, increased public access comes with a greater concern about accidental destruction and intentional illegal collection of cultural artifacts commonly found on the refuge. This could also occur on the Monte Vista and Alamosa Refuges.
- On the Baca Refuge, the proposed auto tour route could increase the likelihood of visitors becoming stranded in relatively remote areas.
- On the Monte Vista Refuge, development of year-round access to Parker Pond could increase disturbance to an important waterbird nesting colony.
- On the Monte Vista Refuge, some additional disturbance would be associated with devel-

opment of observation areas along County Road 6.

- Some additional disturbance would result from any non-motorized trail extending from the city of Monte Vista onto the refuge.
- Construction of a new office and visitor center at either Monte Vista or Alamosa would create a larger footprint, and final siting of the facility would need to consider impacts to wildlife.

Determination

Wildlife interpretation, environmental education, wildlife photography, and wildlife observation are compatible uses of the Alamosa, Baca, and Monte Vista Refuges.

Stipulations Necessary To Ensure Compatibility

Stipulations required on the Alamosa Refuge include:

- Riparian habitat acquired in 2003 with the Lillpop addition was purchased with funds provided by BOR as mitigation for southwestern willow flycatcher habitat lost from the construction and operation of the Salt River Project in Arizona. Consequently, southwestern willow flycatchers are a priority management goal on this tract and destruction of habitat and disturbance of nesting birds must be minimized by careful siting and timing of projects and associated disturbance.
- Additional limited non-motorized access to the refuges would be allowed outside of the critical breeding period.
- Existing administrative roads and trails would be used as much as possible in the expansion of non-motorized access to the refuge, which would minimize ground disturbance, associated habitat loss, and the spread of weeds.
- Additional volunteer recreational vehicle pads would be located in areas that are already disturbed and that are near exist-

ing administrative facilities to minimize soil and wildlife disturbance.

- The refuge manager could terminate or modify any activity if conditions change or assumptions in this analysis are found incorrect, resulting in the activity materially interfering with refuge purposes.
- Interpretive information would be posted and included in refuge brochures describing the impact of disturbance on wildlife and simple practices for the visitor to minimize disturbance.

Stipulations required on the Baca Refuge include:

- Visitors on the auto tour route would be restricted to their vehicles or the immediate area outside their vehicle.
- Refuge staff would temporarily close the auto tour route during times of significant amphibian movement to prevent toad mortality.
- Visitors on the wildlife observation trail(s) would be required to stay on the trail.
- Existing administrative roads and trails would be used as much as possible in the expansion of non-motorized access to the refuge, which would minimize ground disturbance, associated habitat loss, and the spread of weeds.
- Law enforcement presence on the refuge must correspond to the amount of public use to minimize poaching, habitat destruction from off-road driving, and illegal collection of artifacts. Law enforcement presence would also have to increase to ensure that the public has a reasonable expectation of safety when visiting the refuge. Much of the Baca Refuge is relatively isolated from busy roads and people, resulting in a potentially life-threatening situation if visitors and users become stranded due to injury, mud, snow, or break down. Tour routes would be closed during times when conditions pose a significant threat to public safety.
- The use of horses would be restricted to all areas open to non-motorized access and where horses are permitted.

- Additional volunteer recreational vehicle pads would be located in areas that are already disturbed and are near existing administrative facilities to minimize soil and wildlife disturbance.
- The refuge manager could terminate or modify any activity if conditions change or assumptions in this analysis are found to be incorrect, resulting in the activity materially interfering with refuge purposes.
- Interpretive information would be posted and included in refuge brochures describing the impact of disturbance on wildlife and simple practices for the visitor to minimize disturbance.

Stipulations required on the Monte Vista Refuge include:

- Additional non-motorized access to the refuges would be allowed during the non-critical breeding period.
- Existing administrative roads and trails would be used as much as possible in expansion of non-motorized access to the refuge, which would minimize ground disturbance, associated habitat loss, and the spread of weeds.
- Additional volunteer recreational vehicle pads would be located in areas that are already disturbed and are near existing administrative facilities to minimize soil and wildlife disturbance.
- Interpretive information would be posted and included in refuge brochures describing the impact of disturbance on wildlife and simple practices for the visitor to minimize disturbance.

Justification

The abundant wildlife resources found on the refuge complex attract many visitors to the San Luis Valley. The largest draw is the Monte Vista Crane Festival, which attracts thousands of people annually during the spring migration of sandhill cranes. This event, which is put on in partnership with the Friends group and the local community, provides a significant boost to the local economy. Other visitors frequent the auto tour routes at the Monte Vista and Alamosa Refuges, walk the nature trails, or enjoy

the spectacular vistas from the Bluff Overlook at the Alamosa Refuge.

The Service is unable to open the Baca Refuge to significant public access without the benefit of a planning process with public participation. Overall, access for visitors wanting to participate in nonconsumptive recreation on these three refuges has been limited. It is clear from talking with visitors and community members and from a USGS visitor survey of the Monte Vista Refuge that there is a substantial demand for more opportunities for public access on these refuges. It is the intent of this determination and the CCP to provide well-thought-out and desirable access opportunities without materially interfering with achievement of refuge wildlife management goals.

Mandatory 15-year reevaluation date: 2030

Commercial Photography

The San Luis Valley offers several photogenic wildlife spectacles such as the sandhill crane migration, elk herds, and waterfowl concentrations, with a stunning backdrop provided by the San Juan Mountains and the Culebra and Sangre de Cristo Ranges. Wildlife observation areas, hiking trails, and auto tour routes are available on the Alamosa and Monte Vista Refuges, while similar opportunities are being proposed in the CCP for the Baca Refuge. Commercial photographers and videographers regularly visit the San Luis Valley.

Commercial filming is defined as the digital recording or filming of a visual image or sound recording by a person, business, or other entity for a market audience, such as for a documentary, television or feature film, advertising, or similar project. It does not include news coverage or visitor use. Still photography is defined as the capturing of a still image on film or in a digital format. These descriptions and further information about these activities are found in 43 CFR Part 5 (Department of the Interior) and 50 CFR Part 27 (Fish and Wildlife Service).

Under the Code of Federal Regulations (50 CFR § 27.71), special use permits for commercial filming and still photography are required when “it takes place at location(s) where or when members of the public are generally not allowed; or (2) it uses model(s), sets(s), or prop(s) that are not a part of the location’s natural or cultural resources or administrative facilities; or (3) the agency would incur additional administrative costs to monitor the activity; or (4) the agency would need to provide management and oversight to:

- i. avoid impairment or incompatible use of the resources and values of the site; or
- ii. limit resource damage; or
- iii. minimize health or safety risks to the visiting public.”

These permit requests are evaluated on an individual basis, using a number of Department of the Interior, Service, and National Wildlife Refuge System policies (for example, 43 CFR Part 5, F0 CFR Part 7, 8 RM 16). Commercial filming would be managed on the refuges through the special use permitting process to minimize the possibility of damage to cultural or natural resources or interference with other visitors to the area.

Availability of Resources

In general, the refuge would normally incur no expense except administrative costs for review of applications, issuance of a special use permit, and staff time to conduct compliance checks. Special use permits for commercial filming and still photography would require payment of a location fee and a reimbursement for actual costs incurred in processing the permit request and administering the permit.

Anticipated Impacts of Use

Wildlife photographers and filmmakers tend to create the largest disturbance impacts of all wildlife observers (Dobb 1998, Klein 1993, Morton 1995). While wildlife observers frequently stop to view species, wildlife photographers and cinematographers are more likely to approach wildlife (Klein 1993). Even a slow approach by wildlife photographers tends to have behavioral consequences on wildlife species (Klein 1993). Other impacts include the potential for photographers to remain close to wildlife for extended periods of time in an attempt to habituate the wildlife subjects to their presence (Dobb 1998) and the tendency for photographers to use low-power lenses to get much closer to their subjects (Morton 1995). This usually results in increased disturbance to wildlife and habitat. Handling of animals and disturbing vegetation (such as cutting plants and removing flowers) is prohibited on national wildlife refuges.

A special use permit request would be denied if the commercial filming, audio recording, or still photography activities are found not to be compatible with refuge purposes.

Determination

Commercial filming, audio recording, and still photography are compatible uses of the Alamosa, Baca, and Monte Vista Refuges.

Stipulations Necessary To Ensure Compatibility

- All commercial filming requires a special use permit.
- Special use permits would identify conditions that protect the refuges’ values, purposes, and resources; ensure public health and safety; and prevent unreasonable disruption of the public’s use and enjoyment of the refuge. Such conditions may be specifying road conditions when access would not be allowed, establishing time limitations, and identifying routes of access into refuges. These conditions would be identified to prevent excessive disturbances to wildlife, damage to habitat or refuge infrastructure, or conflicts with other visitor services or management activities.
- The special use permit would stipulate that imagery produced on refuge lands would be made available to the refuge to use in environmental education and interpretation, outreach, internal documents, or other suitable uses. In addition, any commercial products must include appropriate credits to the refuges, the Refuge System, and the Service.
- Any commercial filming, still photography, or audio recording permits that are requested must demonstrate a means to extend public appreciation and understanding of wildlife or natural habitats, or enhance education, appreciation, and understanding of the Refuge System, or facilitate outreach and education goals of the refuges.
- Still photography and audio recording also require a special use permit (with specific conditions as outlined above) if one or more of the following would occur:
 - it would occur in places where or when members of the public are not allowed.

- it uses model(s), set(s), or prop(s) that are not part of the location’s natural or cultural resources or administrative facilities.
- the refuge would incur additional administrative costs to monitor the activity.
- the refuge would need to provide management and oversight to avoid impairment of the resources and values of the site; limit resource damage; or minimize health and safety risks to the visiting public.
- the photographer(s) intentionally manipulate(s) vegetation to create a “shot” (for example cutting vegetation to create a blind).
- To minimize impact on refuge lands and resources, the refuge staff would ensure that all commercial filmmakers, commercial still photographers, and commercial audio recorders comply with policies, rules, and regulations, and refuge staff would monitor and assess the activities of all filmmakers, photographers, and audio recorders.

Justification

Commercial filming, still photography, or audio recording are economic uses that must contribute to the achievement of the refuge purposes, mission of the Refuge System, or the mission of the Service. Providing opportunities for commercial filming, still photography, and audio recording that meets the above requirements should result in increased public awareness of the refuges’ ecological importance as well as advancing the public’s knowledge and support for the Refuge System and the Service. The stipulations outlined above and conditions imposed in the special use permits issued to commercial filmmakers, still photographers, and audio recorders would ensure that these wildlife-dependent activities occur without adverse effects on refuge resources or refuge visitors.

Mandatory 10-year reevaluation date: 2025

Prescribed Grazing and Haying

Since the three refuges were established, prescribed grazing and haying have been used to achieve a number of habitat objectives. These tools are used to improve the vigor and maintain the

health of plant communities by removing decadent vegetation that has accumulated over several growing seasons, as well as reduce or eliminate infestations of noxious and invasive plants, often in combination with herbicide applications. Additionally, they are used to modify the condition of plant communities to make them more attractive to some wild-life species.

Domestic cattle (including calves and yearlings), domestic sheep, and, to a lesser degree, bison (which are classified as “livestock” by the State of Colorado) have been used on the refuges.

Haying and grazing is conducted with private cooperators through annual special use permit or cooperative farming agreements. Cooperators are charged at fair market value for the grazing or haying privilege, and the permit or agreement fee may be reduced based on project objectives.

Hay cutting is used almost entirely in wetland habitat while livestock grazing is used mostly on wetland. Livestock grazing is used in uplands to combat noxious weeds.

In all cases grazing and haying are and would be used to meet specific management objectives outlined in the permit that would be communicated to the permittee or cooperator.

Availability of Resources

Current staffing levels allow for fundamental planning and administration of grazing and haying programs, but allow only very basic monitoring of treatment efficacy. Additional staff positions are identified for the proposed alternative (table 7) to satisfy this need.

Anticipated Impacts of Use

As with the use of many vegetation management tools, there could be a negative impact for some species in the short term. For example, a temporary drop in duck nesting densities has been documented on the Monte Vista Refuge after vegetation removal in wetland habitat. This immediate decline in nesting is confined to the treatment area and is relatively short term. Although refuge staff and permittees are increasingly relying on single strand electric fencing, multi-strand barbed wire fence is still required in many instances. Improperly designed barbed wire fence presents hazards to elk, deer, pronghorn, and some bird species.

Both grazing and haying can be detrimental to riparian habitat and riparian habitat restoration projects. Steps must be taken to exclude grazing and haying from riparian areas unless they are used as part of a deliberate prescription.

The benefits of thoughtful use of haying and grazing exceed the negative impacts.

Determination

Grazing and haying are compatible uses within the refuge complex.

Stipulations Necessary To Ensure Compatibility

- Ensure control of location, duration, and intensity of grazing through carefully planned and implemented projects that are designed to achieve site-specific biological objectives. Use herders to move animals when fencing requirements are too large or impractical.
- Monitor results of grazing and haying treatments.
- Design and implement haying projects to achieve biological objectives.
- Use the appropriate class of livestock to meet project goals.
- Grazing or haying prescriptions on any individual refuge would not exceed 25 percent of the refuge in any given year.
- The refuge manager would retain control over all haying and grazing practices and has the right to discontinue any practice if conditions change that may compromise the compatibility of the project.

Justification

Prescribed livestock grazing and haying are two grassland and wetland management tools that are used in combination with rest, prescribed fire, and herbicides, and are effective in maintaining and restoring quality migratory bird habitat. They are also valuable tools in establishing vegetative structural conditions needed for the life requirements of many species, such as loafing and foraging habitat for sandhill cranes, foraging habitat for dabbling ducks and some shorebirds, and foraging and breeding habitat for Gunnison's prairie dogs. Grazing and haying practices are easily planned, controlled, implemented, and monitored. Due to the value of cattle and hay as commodities, grazing and haying are

extremely cost-effective methods to treat large tracts of habitat to meet habitat objectives.

Many wetland-dependent migratory bird species (waterfowl, northern harriers, and short-eared owls in particular) require tall dense stands of grass and sedges for optimal nesting habitat. These plant communities have evolved under a regime of regular disturbance, primarily ungulate grazing and fire. Historic management practices on all three of the refuges consisted of frequent grazing or haying events that removed decadent vegetation from previous years. The Alamosa and Monte Vista Refuges saw little disturbance of vegetation during the late 1990s and early 2000s, resulting in little removal of residual vegetation. Refuge staff has observed that the overall health and vigor of these plant communities declined during this time period. The years of accumulation of vegetation seem to have reduced the stem density and height of grasses and sedges, likely from (1) shading the current year's growth and compromising photosynthesis, (2) insulating the soil and effectively retarding the initiation of spring plant growth, and (3) preventing nutrients contained in above-ground portions of the plant from reentering the soil and nutrient cycle.

Refuge staff must be able to use these tools to restore and maintain healthy plant communities in conditions that directly benefit migratory birds and other wildlife.

Mandatory 10-year reevaluation date: 2025

Cooperative Farming Program (Monte Vista Refuge)

This plan proposes to continue farming on the Monte Vista Refuge to produce an average of 190 acres of small grain (primarily barley) annually in order to provide food for spring-migrating sandhill cranes. This food production would occur on four fields, each of which would be irrigated by center pivot sprinklers. This irrigation technique is preferred due to the dramatically reduced cost (primarily for labor) and greater water efficiency compared with the flood irrigation practices that were used before 1990.

Farming operations would be conducted by a cooperating farmer under an agreement with the refuge manager. The typical agreement allows the cooperator to plant half of a field with barley and the other half with alfalfa. The four farm fields on the refuge average about 100 acres of cultivated land on each. The cooperator is responsible for costs associated with planting and irrigating (pumping), while

the refuge is responsible for maintaining the associated water rights and for major maintenance to the sprinkler system and well. At the end of the growing season, the small grain crops are not harvested and are left standing. Just prior to and during spring sandhill crane migration, these standing crops are scattered to the ground by mowing them, which makes them available for the migrating cranes. The alfalfa grown on the other half of the irrigated field becomes the property of the cooperative farmer. Refuge and cooperator responsibilities may vary between fields and years in response to changing maintenance circumstances.

Availability of Resources

Because of the low costs associated with the cooperative farming approach, adequate funding exists to administer this farming program. Refuge responsibilities include maintenance of the associated water rights and maintenance of irrigation equipment. Water rights maintenance includes the ability to demonstrate beneficial use of the water and compliance with upcoming ground water rules and regulations pertaining to groundwater. Some of the systems irrigating these fields are supplemented by surface water when available. In these instances, refuge responsibilities include membership in the mutual ditch company and maintenance of the water distribution system. Maintenance of these water rights is required whether the water is used for farming, wetland irrigation, or other wildlife habitat objectives. Maintenance of the actual irrigation equipment is typically met within annual budgets. Exceptions include rare catastrophic pump, sprinkler, or even well failures. In these instances, Refuge System policy allows for adjustment of the annual agreement with the cooperator to cover these repairs.

Anticipated Impacts of Use

It is recognized that the benefits of this farming program come with tradeoffs. The benefits of this farming program include (1) assurance that the Rocky Mountain population of greater sandhill cranes arrive on breeding grounds in good physical condition, increasing the likelihood of a successful nesting effort and (2) providing a remarkable and popular wildlife viewing opportunity on the refuge. The Monte Vista Crane Festival has been conducted on the Monte Vista Refuge for 31 years and is the largest wildlife viewing event in Colorado. Large numbers of cranes feeding on one or more of these fields provides unparalleled viewing opportunities for thousands of visitors each spring.

Continuation of the farming program comes largely at the cost of using land and water for grain

production instead of maintaining native wildlife habitat.

Determination

This cooperative farming program is compatible when used as a tool for the net benefit of migratory birds.

Stipulations Necessary To Ensure Compatibility

Cooperative farming would be conducted under the terms of a cooperative farming agreement. The agreement would contain general and special conditions to ensure consistency with management objectives. Some of the general stipulations include:

- The use of herbicides would be coordinated with the refuge manager and comply with the station's pesticide use plan.
- Genetically modified crops and neonicotinoids (insecticides) between crops are not currently used in this farming program. Any future use of such crops would comply with Region 6 policy guidance.
- The cooperative farmer cannot begin harvesting alfalfa in the spring until after most ground-nesting bird activity is complete, as determined by the refuge manager.

Other stipulations would be considered depending upon site- and time-specific circumstances.

Justification

For centuries, the San Luis Valley has been an important migratory staging area for the Rocky Mountain population of greater sandhill cranes. During spring migration, an estimated 18,000–20,000 greater sandhill cranes and approximately 5,000–6,000 lesser and Canadian sandhill cranes inhabit the valley between late February and early April. During this period, they build up necessary energy reserves to finish migration to their nesting grounds (Tacha et al. 1987). These energy reserves also greatly influence breeding success. However, the loss of natural shallow-water wetlands, due to land use modifications and alterations to hydrology, has reduced the overall amount of potential foraging areas throughout the valley. Furthermore, it is believed that sandhill cranes did not migrate through the valley until later in the spring when natural wetlands would have been largely free of ice and more

invertebrates and other natural food sources would have been available. With the advent of agricultural production of small grains in the valley over the last century, sandhill cranes began arriving as early as mid-February to take advantage of the waste grain left in agricultural fields after harvest. Sandhill cranes have likely altered the timing of their migration to take advantage of this readily available food source. They now arrive in the valley in late winter when most wetland areas are still frozen and natural food sources are largely unavailable in sufficient amounts to provide the energy required to build fat reserves. As a result, they have become dependent on small grain production in the valley.

Sandhill cranes forage for small grains in the farm fields on the Monte Vista Refuge and on private agricultural fields. In recent years, fall tillage and flood irrigation of privately owned small grain fields has become increasingly widespread in the valley. Farmers implement these practices to encourage the growth and then subsequent freezing of waste seeds to get a clean field for spring planting. In addition, since the late 1990s, the amount of acres in small grain production in the valley has been dramatically reduced because many farmers have switched to alfalfa, which is a more profitable crop. These changes in farming practices have resulted in a dramatic reduction in waste grain availability for sandhill cranes during spring and have prompted concern over whether current or future food resources are adequate to meet spring demands for migrating cranes. We would therefore continue agricultural production of a minimum of 190 acres of small grains (primarily barley) on the Monte Vista Refuge to ensure that this critical food resource is provided and available for spring staging cranes.

Mandatory 10-year reevaluation date: 2025

Research

The refuge complex occasionally receives requests to conduct research. Recent examples include projects assessing the degree of water evapotranspiration in the San Luis Valley. Priority would be given to studies that contribute to the enhancement, protection, preservation, and management of native plants, fish, wildlife populations, and habitat on the refuges. Research applicants must submit a proposal that outlines the (1) objectives of the study; (2) justification for the study; (3) detailed study methodology and schedule; and (4) potential impacts on refuge wildlife and habitat, including disturbance (short and long-term), injury, or mortality. This includes (1) a description of mitigation measures the researcher

would take to reduce disturbances or impacts; (2) personnel required and their qualifications and experience; (3) status of necessary permits (such as scientific collecting permits and endangered species permits); (4) costs to refuge and refuge staff time requested, if any; and (5) product delivery schedules such as anticipated progress reports and end products such as reports or publications. Refuge staff and others, as appropriate, would review research proposals and issue special use permits if approved.

Evaluation criteria would include the following:

- Research that would contribute to specific refuge management issues would be given higher priority than the other requests.
- Research that would conflict with other ongoing research, monitoring, or management programs would not be approved.
- Research projects that can be conducted off-refuge are less likely to be approved.
- Research that causes undue disturbance or is intrusive would likely not be approved. The degree and type of disturbance would be carefully weighed when evaluating a research request.
- Research evaluation would determine if any effort has been made to minimize disturbance through study design, including adjusting location, timing, number of permits, study methods, and number of study sites.
- Research evaluation would determine if any mitigation planning is included to minimize disturbances or impacts or to reclaim resultant disturbed areas.
- Research evaluation would determine if staffing or logistics make it impossible for the refuge to monitor researcher activity in a sensitive area.
- Specific timelines, including the length of the project and product delivery dates, would be considered and agreed upon before approval. All projects would be reviewed annually.

Availability of Resources

At current and anticipated levels, adequate funding exists to manage requests for research on the

Alamosa, Baca, and Monte Vista Refuges. Administration of these requests usually includes evaluation of the proposal as well as management and monitoring of the associated special use permits. Our experience has indicated that the nominal cost of managing research projects is typically offset by the value of information acquired from the research.

Anticipated Impacts of Use

Some degree of disturbance is expected with all research activities since they often include areas of the refuges closed to or with limited public access, and some research requires collection of samples or direct handling of wildlife. However, minimal impacts on refuge wildlife and habitats is expected with research studies because special use permits would specify conditions to ensure that impacts to wildlife and habitats are kept to a minimum.

Determination

Research is a compatible use of the Alamosa, Baca, and Monte Vista Refuges.

Stipulations Necessary To Ensure Compatibility

- Extremely sensitive wildlife habitat areas and wildlife species would be provided sufficient protection from disturbance by limiting proposed research activities in these areas. All refuge rules and regulations would be strictly enforced unless otherwise exempted by refuge management.
- Refuge staff would use the criteria for evaluating a research proposal, as outlined above under “Description of Use,” when determining whether to approve a proposed study on the refuge. If proposed research methods are evaluated and determined to have potential impacts on refuge resources (habitat and wildlife), it must be demonstrated that the research is necessary for refuge resource conservation management. Measures to minimize potential impacts would need to be developed and included as part of the study design. In addition, these measures would be listed as conditions and requirements of the special use permit.
- Refuge staff would monitor research activities for compliance with conditions of the special use permit. At any time, refuge staff

may accompany the researchers to determine potential impacts. Staff may determine that previously approved research and special use permits be terminated due to observed impacts. The refuge manager would also have the ability to cancel a special use permit if the researcher is out of compliance, or to ensure wildlife and habitat protection.

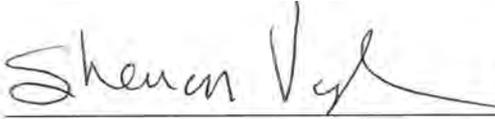
Justification

The program as described is determined to be compatible. Potential impacts of research activities on refuge resources would be minimized because sufficient restrictions would be included in the required special use permits and all activities would be monitored by refuge staff. At a minimum, research activities would have no significant impact on refuge resources and are expected to contribute to the enhancement, protection, preservation, and management of refuge wildlife populations and their habitats.

Mandatory 10-year reevaluation date: 2025

D.6 Approval of Compatibility Determinations

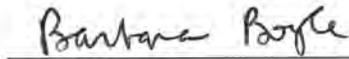
Submitted by:

 6/9/15

Sharon Vaughn, Project Leader
San Luis Valley National Wildlife Complex
Alamosa, Colorado

Date

Reviewed by:

 7-14-15

Barbara Boyle, Refuge Supervisor
U.S. Fish and Wildlife Service, Region 6
National Wildlife Refuge System
Lakewood, Colorado

Date

Approved by:

 7/15/2015

Will Meeks, Assistant Regional Director
U.S. Fish and Wildlife Service, Region 6
National Wildlife Refuge System
Lakewood, Colorado

Date

Appendix E

Wilderness Review

This appendix summarizes our wilderness review on the refuge complex.

The purpose of a wilderness review is to identify and recommend for Congressional designation National Wildlife Refuge System (System) lands and waters that merit inclusion in the National Wilderness Preservation System. Wilderness reviews are a required element of CCPs and are conducted in accordance with the refuge planning process outlined in 602 FW 1 and 3, including public involvement and NEPA compliance.

There are three phases to the wilderness review: (1) inventory, (2) study; and (3) recommendation. Lands and waters that meet the minimum criteria for wilderness are identified in the inventory phase. These areas are called wilderness study areas (WSAs). WSAs are evaluated through the CCP process to determine their suitability for wilderness designation. In the study phase, a range of management alternatives are evaluated to determine if a WSA is suitable for wilderness designation or management under an alternate set of goals and objectives that do not involve wilderness designation. The recommendation phase consists of forwarding or reporting recommendations for wilderness designation from the Director through the Secretary and the President to Congress in a wilderness study report.

If the inventory does not identify any areas that meet the WSA criteria, we document our findings in the administrative record for the CCP which fulfills the planning requirement for a wilderness review.

Because Monte Vista Refuge has been heavily manipulated over time, we determined that no lands within the refuge even minimally met the criteria for wilderness designations, and we did not complete any further review or inventory of the refuge.

We inventoried Alamosa and Baca Refuges and subsequently found that no areas of the Alamosa Refuge met the eligibility criteria for a WSA as defined by the Wilderness Act (refer to table E1 below). However, we found two portions of the Baca Refuge along the southeastern boundary of the refuge and adjacent to the Great Sand Dunes National Park and Preserve's proposed wilderness area meet the criteria for wilderness designation (refer to tables E1 and E2 below).

E.1 Inventory Criteria

The wilderness inventory is a broad look at the planning area to identify WSAs. These are roadless areas that meet the minimum criteria for wilderness identified in Section 2(c) of the Wilderness Act as stated:

“A wilderness, in contrast with those areas where man and his works dominate the landscape, is hereby recognized as an area where the earth and its community of life are untrammelled by man, where man himself is a visitor who does not remain. An area of wilderness is further defined to mean in this Act an area of undeveloped Federal land retaining its primeval character and influence, without permanent improvements or human habitation, which is protected and managed so as to preserve its natural conditions, and which: (1) generally appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable; (2) has outstanding opportunities for solitude or a primitive and unconfined type of recreation; (3) has at least five thousand acres of land or is of sufficient size as to make practicable its preservation and use in an unimpaired condition; and (4) may also contain ecological, geological or other features of scientific, educational, scenic, or historical value.”

A WSA must be a roadless area or island, meet the size criteria, appear natural, and provide outstanding opportunities for solitude or primitive recreation. The process for identification of roadless areas and application of the wilderness criteria are described in the following sections.

Identification of Roadless Areas and Roadless Islands

Identification of roadless areas and roadless islands required gathering and evaluating land status maps, land use and road inventory data, and aerial and satellite imagery for the refuges. “Roadless” refers to the absence of improved roads suitable and maintained for public travel by means of motorized vehicles primarily intended for highway use. Only

lands currently owned by the Service in fee title or BLM lands managed under a cooperative agreement were evaluated.

Roadless areas or roadless islands meet the size criteria if any one of the following standards applies:

- An area with over 5,000 contiguous acres. State and private lands are not included in making this acreage determination.
- A roadless island of any size. A roadless island is defined as an area surrounded by permanent waters or that is markedly distinguished from the surrounding lands by topographical or ecological features.
- An area of less than 5,000 contiguous Federal acres that is of sufficient size as to make practicable its preservation and use in an unimpaired condition, and of a size suitable for wilderness management.
- An area of less than 5,000 contiguous Federal acres that is contiguous with a designated wilderness, recommended wilderness, or area under wilderness review by another Federal wilderness managing agency such as the Forest Service, National Park Service, or Bureau of Land Management.

Evaluation of the Naturalness Criteria

In addition to being roadless, a WSA must meet the naturalness criteria. Section 2(c) defines wilderness as an area that “... generally appears to have been affected primarily by the forces of nature with the imprint of man’s work substantially unnoticeable.” The area must appear natural to the average visitor rather than “pristine.” The presence of historic landscape conditions is not required. An area may include some human impacts provided they are substantially unnoticeable in the unit as a whole. Significant human-caused hazards, such as the presence of unexploded ordnance from military activity and the physical impacts of refuge management facilities and activities are also considered in evaluation of the naturalness criteria. An area may not be considered unnatural in appearance solely on the basis of the “sights and sounds” of human impacts and activities outside the boundary of the unit.

Evaluation of Outstanding Opportunities for Solitude or Primitive and Unconfined Recreation

In addition to meeting the size and naturalness criteria, a WSA must provide outstanding opportunities for solitude or primitive recreation. The area does not have to possess outstanding opportunities for both solitude and primitive and unconfined recreation and does not need to have outstanding opportunities on every acre. Further, an area does not have to be open to public use and access to qualify under this criteria; Congress has designated a number of wilderness areas in the Refuge System that are closed to public access to protect resource values.

Opportunities for solitude refer to the ability of a visitor to be alone and secluded from other visitors in the area. Primitive and unconfined recreation means non-motorized, dispersed outdoor recreation activities that are compatible and do not require developed facilities or mechanical transport. These primitive recreation activities may provide opportunities to experience challenge and risk, self reliance, and adventure.

These two “opportunity elements” are not well defined by the Wilderness Act but, in most cases, can be expected to occur together. An outstanding opportunity for solitude may be present in an area offering only limited primitive recreation potential. Conversely, an area may be so attractive for recreation use that experiencing solitude is not an option.

Evaluation of Supplemental Values

Supplemental values are defined by the Wilderness Act as “...ecological, geological, or other features of scientific, educational, scenic, or historic value.” These values are not required for wilderness but their presence should be documented.

E.2 Inventory and Findings Alamosa Refuge

As documented below, none of the lands within Alamosa Refuge meet the criteria necessary for a WSA. Table E1 summarizes the inventory findings for each unit.

Background

Alamosa Refuge consists of 12,026 acres and was established in 1962 under authority of the Migratory Bird Treaty Act with the authorizing purpose “... for

use as inviolate sanctuary or for any other management purpose, for migratory birds.” Primarily located within the historic Rio Grande floodplain, the refuge encompasses lands that include 7 river miles of the Rio Grande as it transitions from flowing in a southeasterly direction to nearly directly south. This transition in direction over time has resulted in the river’s taking many paths over the landscape as it changed directions. This movement of the river created an extensive system of channel sloughs, oxbow lakes, and wet meadow depressions, which make up the character of the refuge today.

Many land and water use changes have occurred throughout the San Luis Valley since European settlement. These changes revolved primarily around the expansion of agriculture and have resulted in the diminished availability of surface and ground water to the refuge. Less water available in the Rio Grande as it enters the refuge made it necessary for the development of irrigation systems to deliver water through ditches and canals to areas that historically

were naturally wet. In efforts to maintain the productivity of the wetlands on the refuge over time, we have continued to make modifications by the development of even more extensive water management infrastructure (levees, ditches, and water-control structures), all of which exist on the landscape today. In addition, the landscape encompassing the refuge was changed by the construction of a BOR water salvage project that included a large, extraordinary canal that bisects the refuge. The canal, which has extensive associated support infrastructure attached to it as it passes through the refuge (heated and enclosed fish barrier screens, and a large concrete spillway and apron), was designed to deliver water to the Rio Grande below the last diversion on the river that occurs on the refuge.

For the purposes of this review, we have divided the refuge into two parcels: Parcel 1 includes those refuge lands that occur north and west of the Closed Basin Project canal, and Parcel 2 is all refuge lands south and east of the Closed Basin canal.

Table 37. Evaluation of wilderness values on Alamosa Refuge.

<i>Refuge Area</i>	<i>Areas north and west of Closed Basin canal</i>	<i>Areas south and east of Closed Basin canal</i>
(1) Has at least 5,000 acres of land or is of sufficient size as to make practicable its preservation and use in an unimpaired condition; or (2) generally appears to have been affected primarily by the forces of nature, with the imprint of man’s work substantially unnoticeable?	NO Area is fragmented by county roads, refuge public use roads, and several large irrigation laterals. Large water control structures and manmade dikes are evident throughout as well.	NO Area is fragmented by county roads, refuge public use roads, and several large irrigation laterals. Area is fragmented by county roads, refuge public use roads, and several large irrigation laterals. Large water control structures and man-made dikes are evident throughout as well.
(3a) Has outstanding opportunities for solitude; or (3b) has outstanding opportunities for a primitive and unconfined type of recreation?	NO (3a and 3b) (3a) Area is within 1–5 miles of the city of Alamosa with several public roads intersecting. An active railroad also bounds the unit to the north and an active regional airport is within 3 miles. (3b) Large irrigation canals limit accessibility within the units, and intersecting roads fragment and confine areas.	YES to 3a; NO to 3b (3a) Area is further from town, highways, and active railroad. (3b) Large irrigation canals limit accessibility within the units, and intersecting roads fragment and confine areas.
(4) Contains ecological, geological, or other features of scientific, educational, scenic, or historical value?	YES Area has rich diverse wetlands and riparian areas that provide scientific, educational, and scenic value	YES Area has rich diverse wetlands and riparian areas that provide scientific, educational, and scenic value.
Unit qualifies as a wilderness study area (meets criteria 1, 2, and 3a or 3b)?	NO The human imprint on the environment is substantially noticeable and unavoidable	NO The human imprint on the environment is substantially noticeable and unavoidable.

Roadless Areas, Roadless Islands, and Size Criteria

Parcels 1 and 2: Many of the roads are associated with the intensive irrigation infrastructure necessary for maintaining the refuge's productivity to meet its intended purpose. These roads divide the refuge into several smaller parcels, which are classified as management units. None of the fragmented parcels are larger than 5,000 acres.

Naturalness Criteria

Parcels 1 and 2: The land within Alamosa Refuge has been extensively altered by the construction of a vast irrigation network that allowed it to be intensively managed for hay and cattle production prior to the establishment of the refuge and ensured the productivity of its wetlands as a refuge. As a result, many of the visual qualities associated with those uses are evident on the landscape. Man-made ditches, levees, fences, roads and other infrastructure are evidence of some of the former and current operations, thus detracting from the naturalness of the refuge.

Outstanding Opportunities for Solitude or Primitive and Unconfined Recreation

Parcel 1: There are limited opportunities for solitude or primitive and unconfined recreation in this area as it is closer to the town of Alamosa, an active regional airport, and a busy railway switchyard. Sights and sounds from the town, airport, and switchyard as well as from county roads, refuge headquarters and shop areas, and neighboring agricultural operations interfere with opportunities for solitude and unconfined recreation.

Parcel 2: This area, which is situated east and south of the Closed Basin Project canal, is located further than Parcel 1 from the influence of a neighboring hub community with facilities such as an airport, railyards, and highways. It offers opportunities for relative solitude and unconfined recreation. Neighboring operations and the low hum of a distant town can nearly always be heard, although at a much lower level than the more northern and western parcel areas.

Supplemental Values

Alamosa Refuge consists of over 12,000 acres of productive and diverse habitats flanked on the west by the Rio Grande and on the east by a large bluff escarpment providing an overlook of the entire refuge. A mosaic of seasonal to permanent wetlands and alkaline desert uplands provide for a diverse assemblage of wildlife. The juxtaposition of the bluff escarpment with nearby wetlands provided an important lookout for countless generations of hunters and as a result contains the rich archeological history of over 8,000 years of use by humans.

Although the refuge is surrounded by activities ranging from the city of Alamosa to several agricultural operations and a rail switchyard, portions still offer excellent relief from this nearby urban setting. In addition, relatively dark night skies are abundant on the southern portions of the refuge.

E.3 Inventory and Findings for Baca Refuge

As documented below, there are two areas within Baca Refuge that meet the criteria necessary for a WSA. Figure 55 shows these areas, and table E2 summarizes the inventory findings for each of the refuge's seven major management areas.

Background

The Baca Refuge located in the northeastern portion of the San Luis Valley in south-central Colorado currently contains roughly 85,942 acres of the nearly 92,500 acres authorized by Congress in 2000 as part of the Great Sand Dunes National Park and Preserve Act. The intended purpose of the refuge is to restore, enhance, and maintain wetland, upland, riparian, and other habitats for wildlife, plants, and fish that are native to the San Luis Valley. Refuge policies emphasize migratory bird conservation and consideration of the refuge in the context of broader San Luis Valley conservation efforts.

The refuge, although located at the base of the impressive Sangre de Cristo Mountains and receiving most of the runoff from the tallest portions of this steep mountain chain, is part of a closed basin having no natural surface outlet connecting it to the Rio Grande, which is the primary artery transferring water out of the San Luis Valley. Lands encompassing the refuge include the major confluence of all

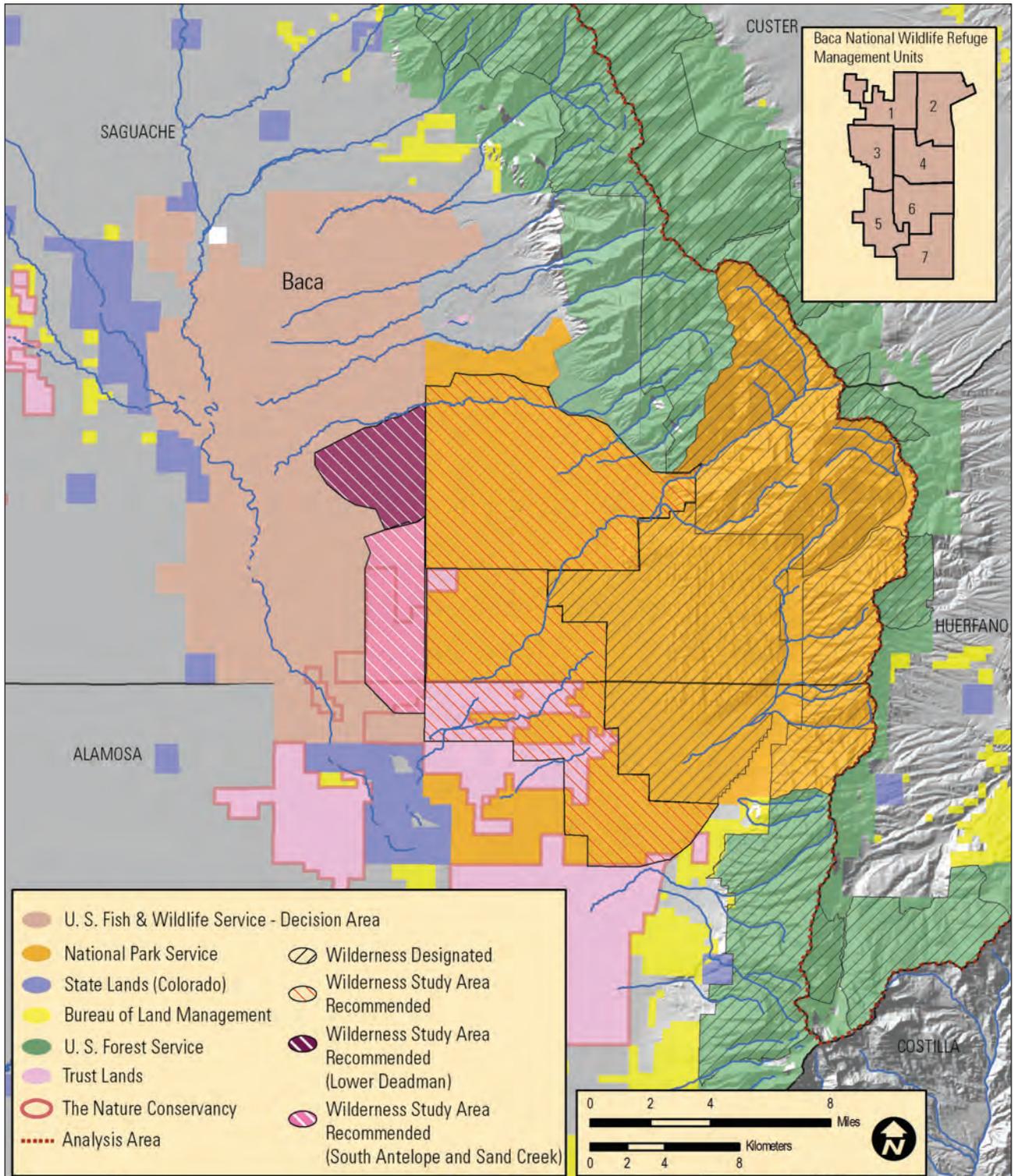


Figure 55. Wilderness Inventory for Baca Refuge.

surface waters draining into the northern portions of the valley from several creeks that originate in the Sangre de Cristo Mountains and discharge into San Luis Creek, and from Saguache and La Garita creeks, which originate in the San Juan Mountains and also discharge into San Luis Creek. Historically, water from these sources maintained one of the largest playa wetland complexes in the San Luis Valley. Restoration of this wetland complex is an emphasis for the Service.

The Baca Refuge contains a large portion of the regionally unique eolian sand sheet associated with the Great Sand Dunes complex, which features the tallest dunes in North America and one of the most fragile and complex dune systems in the world. The portions of this dune system on the refuge contain many unique sand ramps and stabilizing dunes, which lead to and eventually become part of the larger dune mass. These areas provide tremendously scenic settings, which include the massive dunes surrounded by alpine peaks. In addition, portions of the refuge contain remnants of some of the oldest known archaeology in the San Luis Valley (12,000 years of human history in the San Luis Valley).

The majority of the refuge area receiving surface water was developed as part of the historic Baca Grant Ranch. This ranch remained in continuous operation under different ownerships from the late 1800s until the land was acquired by the Service and the refuge was established. An intensive historic network of canals and ditches carry water from streams and wells to meadows that were historically irrigated for the production of forage for large cattle operations that existed there for nearly 120 years. The refuge continues to maintain and operate this infrastructure to provide quality wetland habitats in support of the Service mission and the refuge's intended purposes.

The Baca Refuge borders lands owned by TNC, NPS, CPW and the Colorado State Land Board. The complex of lands within these ownerships including the refuge, total more than 500,000 acres of contiguous protected land and include the Great Sand Dunes National Park and Preserve, TNC's Medano Ranch Preserve, and the San Luis Lake State Park and Wildlife Area. Management of these lands is primarily focused on protecting the region's hydrology, as well as the ecological, cultural, and wildlife resources of the area.

BOR operates a ground water "salvage" project within the valley's Closed Basin, including major portions of the refuge. This project extracts shallow ground water from the closed basin portion of the valley and delivers it to the Rio Grande through a 42-mile-long canal originating on the western boundary of the refuge. About one-third of this project's wells are within the boundaries of the Baca Refuge.

This array of wells and a vast amount of infrastructure (well sites, pipelines, and an extensive array of powerlines and roads) dissect the majority of the western portions of the refuge.

The northeastern portion of the refuge is bounded by a 15,000-plus-acre subdivision with over 4,000 platted buildable lots and over 600 full-time residents. The landbase for this subdivision was carved from within the boundaries of the historic Baca Grant in the early 1970s. In addition, the subsurface mineral, and oil and gas rights were severed from those portions of the refuge that were part of the historic Baca Grant.

Roadless Areas, Roadless Islands, and Size Criteria (Figure 55)

Management Areas 1 and 2: These areas of the refuge contain a series of refuge-maintained roads that are used frequently in the maintenance and operation of the refuge's intensive irrigation infrastructure. In addition, these roads are heavily used by contractors and permittees assisting the Service in maintaining the refuge's productivity to meet its intended purpose. Three of the four CCP public use alternatives consider development of an auto tour route in these areas. These areas of the refuge contain a greater diversity of habitats of relatively smaller patch size and numerous fences delineating individual management units. Management Areas 3 and 5: These areas in the heart of the Closed Basin sump area contain a vast network of roads, powerlines, wells, and pipelines that comprise nearly one-third of BOR's Closed Basin Project. This extensive infrastructure greatly fragments these areas. Management Areas 4, 6, and 7: Western portions of these units are fragmented by the extensive BOR's infrastructure or the refuge's irrigation infrastructure and its associated roads. The eastern portions of these areas, which contribute to the large sand sheet associated with the great sand dunes complex, exhibit very few roads, fences, and other infrastructure that fragment many other areas of the refuge. This largely roadless area encompasses over 13,800 acres and is bounded on the east by Great Sand Dunes National Park lands that are also proposed as wilderness.

Naturalness Criteria

Management Areas 1 and 2: These lands within the Baca Refuge have primarily been shaped by the

rich ranching history that has dominated this landscape for the last 120 years. The majority of the refuge irrigation water rights were secured in the late 1870s, and irrigation and associated infrastructure have continued to develop since then. Even though this presence of man's hand is so readily apparent on the landscape, there is still a feel of naturalness as the rich ranch management history that is predominate in the northern San Luis Valley results in wet meadows of native species that are uncharacteristically large and scenic.

Management Areas 3 and 5: Although these areas of the refuge contain remnants of what once was one of Colorado's largest playa wetland complexes, several decades of over demand on the area's limited water resources has resulted in little water currently reaching the area. It is in these areas where BOR's Closed Basin Project extracts shallow ground water for delivery to the Rio Grande. This water salvage project contains a vast network of roads, powerlines, wells, and pipelines that compromise every aspect of the naturalness of these areas. **Management Areas 4, 6, and 7:** The western portions of land within these management areas contain much of the same infrastructure for BOR's Closed Basin Project or infrastructure used by the Service for irrigation of refuge habitats. These anomalies to the natural landscape greatly detract from the overall naturalness of the area. The eastern portions of these areas, despite having been used for cattle operations for over a century, have retained their natural characteristics. Mostly roadless and intact, these areas have very few infrastructure developments. The developments that do exist consist of two cross fences, a handful of stock and monitoring wells, and three roads transecting the area, which consists of more than 13,800 acres.

Outstanding Opportunities for Solitude or Primitive and Unconfined Recreation

Management Areas 1 and 2: These areas are on the north end of the refuge and are bounded on the north by Saguache County Road T, which serves as the only ingress/egress for the town of Crestone and the Baca Grande Subdivision. In addition, these areas house both the refuge headquarters and shop compounds. Many of the habitats in these areas are irrigated and as such have the related infrastructure. Management units within these areas are, for the most part, smaller which results in more fencing and roads on the overall landscape. All of these factors combined reduce the potential for solitude or primitive and unconfined recreation.

Management Areas 3 and 5: These areas in the heart of the Closed Basin sump contain a vast network of roads, powerlines, wells, and pipelines that comprise nearly one-third of BOR's Closed Basin Project. This extensive infrastructure requires frequent maintenance, resulting in frequent vehicle and equipment use. In addition, Colorado Highway 17 lies within 4 miles of any point in these areas. The noises, visual distractions, and the fragmentation due to the vast infrastructure limit any opportunities for solitude and unconfined recreation in these areas.

Management Areas 4, 6, and 7: Western portions of these units are fragmented by BOR's infrastructure and the refuge's irrigation infrastructure and its associated roads and offer little opportunity for solitude and unconfined recreation, while the eastern portions are located nearly as far as one can get from regular human activity on the valley floor. These eastern areas share an administrative boundary with NPS proposed wilderness associated with the Great Sand Dunes National Park and Preserve. NPS has documented a portion of Great Sand Dunes National Park and Preserve as being one the quietest places in the National Park System. One of the greatest attributes of these areas is the opportunity they provide for solitude and unconfined recreation. With or without a wilderness designation, we would strive to maintain those characteristics in these areas.

Supplemental Values

Management Areas 1 and 2: These areas of the refuge, although altered by the imprint of man, contain many important values, such as remnants of the rich history of the Baca Grant Ranch and many important archeological sites containing artifacts of more than 9,000 years of human existence in and around important wetlands. Habitats in these management areas consist primarily of rabbit-brush-dominated uplands and large expanses of irrigated wet meadows. The juxtaposition of these two habitats is of interest to scientists as they continue to gather information on their importance and role in overall San Luis Valley wetlands conservation.

Although these areas do not offer opportunities for roadlessness or solitude, they are situated within 10 miles of five 14,000 plus foot peaks and offer a fantastic and rare vantage of the impressive mountain range containing them. Because of the extreme private nature of the ranch for over the past century, the area has been viewed and enjoyed by only a few individuals. Many life-long neighbors who have visited these areas have commented on how this place gives them an incredible and wonderfully different

vantage of the area they call their own and where they have spent their whole lives.

Management Areas 3 and 5: These areas in the heart of the Closed Basin sump once contained one of the largest playa wetland complexes in the San Luis Valley, and although they no longer receive large amounts of water and have been fragmented and invaded by man, there are portions that occasionally can be wetted. These areas offer small glimpses of what once likely dominated the landscape. The resulting natural wetlands that occur are of extreme importance to the scientific community. In addition, the overall area contains a rich archaeological and paleontological history.

Management Areas 4, 6, and 7: Western portions of these areas are similar to the areas described above for management areas 3 and 5. The eastern portions have experienced very little intervention by man and are largely unfragmented and intact. Situated on the sand sheet associated with the rare and globally significant Great Sand Dunes complex, they contain unique native habitats and species. Night skies, extreme quietness, and incredible vistas dominate the area and offer a unique insight as to what the valley floor may have been like prior to human settlement.

Table 38. Evaluation of wilderness values on Baca Refuge.

<i>Refuge Unit or Area</i>	<i>Management Areas 1 and 2</i>	<i>Management Areas 3 and 5</i>	<i>Management Areas 4, 6 and 7 (Western Portions)</i>	<i>Management Areas 4, 6, and 7 (Eastern Portions)</i>
(1) Has at least five thousand acres of land or is of sufficient size as to make practicable its preservation and use in an unimpaired condition; or (2) generally appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable.	NO Area is fragmented by roads, fences, irrigation laterals, large water control structures, administrative sites, corrals, and sheds.	NO Area extremely fragmented by BOR's roads, pipelines and a large industrial-like canal which are readily visible. Overhead powerline webs landscape and can be seen for miles.	NO Area extremely fragmented by BOR's roads, powerlines, pipelines, and a large industrial-like canal, which are readily visible. Overhead powerlines landscape and can be seen for miles.	YES Areas mostly intact with very few intervening roads and infrastructure and little sign of intervention by man.
(3a) Has outstanding opportunities for solitude; or (3b) Has outstanding opportunities for a primitive and unconfined type of recreation.	NO (3a) Management areas are bounded on the north by busy county road. In addition, these areas house several administrative sites. All major refuge access points are through these areas. (3b) Area is fragmented by roads, several large irrigation laterals, large water control structures, corrals, and sheds. Smaller management units result in more confinement.	NO Area extremely fragmented by BOR's roads, powerlines, pipelines and a large industrial-like canal	NO Area extremely fragmented by BOR's roads, powerlines, pipelines, and a large industrial-like canal.	YES Areas not easily accessible and located nearly as far from regular human activity as possible on the valley floor; share boundary with current WSA.
(5) Contains ecological, geological, or other features of scientific, educational, scenic, or historical value?	YES Area has rich diverse wetland, riparian, and upland habitats. Provides scientific, educational and scenic value. Contains rich historic and prehistoric values.	YES Area has rich playa habitats which provide scientific, educational and scenic value. Also, contains rich prehistoric values.	YES Area has rich playa habitats that provide scientific, educational, and scenic value. Also, contains rich prehistoric values.	YES Areas associated with rare and globally significant Great Sand Dunes complex. Contains unique native habitats and rich historic and prehistoric values.
Unit qualifies as a wilderness study area (meets criteria 1, 2, and 3a or 3b)?	NO The human imprint on the environment is substantially noticeable and unavoidable	NO The human imprint on the environment is substantially noticeable and unavoidable	NO The human imprint on the environment is substantially noticeable and unavoidable	YES

Appendix F

Species Lists

Common Name	Scientific Name	Common Name	Scientific Name
Birds			
✧ Known to nest on complex > Suspected to nest on complex < Rare or accidental sightings			
Loons			
< Pacific loon	<i>Gavia pacifica</i>	Snow goose	<i>Chen caerulescens</i>
< Common loon	<i>Gavia immer</i>	Ross' goose	<i>Chen rossii</i>
Grebes		✧ Canada goose	<i>Branta canadensis</i>
✧ Pied-billed grebe	<i>Podilymbus podiceps</i>	Tundra swan	<i>Cygnus columbianus</i>
✧ Eared grebe	<i>Podiceps nigricollis</i>	Wood duck	<i>Aix sponsa</i>
> Western grebe	<i>Aechmophorus occidentalis</i>	✧ Gadwall	<i>Anas strepera</i>
Clark's grebe	<i>Aechmophorus clarkii</i>	✧ American wigeon	<i>Anas americana</i>
Pelicans		✧ Mallard	<i>Anas platyrhynchos</i>
American white pelican	<i>Pelecanus erythrorhynchos</i>	✧ Blue-winged teal	<i>Anas discors</i>
Cormorants		✧ Cinnamon teal	<i>Anas cyanoptera</i>
Double-crested cormorant	<i>Phalacrocorax auritus</i>	✧ Northern shoveler	<i>Anas clypeata</i>
Bitterns, Herons, and Egrets		✧ Northern pintail	<i>Anas acuta</i>
✧ American bittern	<i>Botaurus lentiginosus</i>	✧ Green-winged teal	<i>Anas crecca</i>
< Least bittern	<i>Ixobrychus exilis</i>	Canvasback	<i>Aythya valisineria</i>
Great blue heron	<i>Ardea herodias</i>	✧ Redhead	<i>Aythya americana</i>
Great egret	<i>Ardea alba</i>	Ring-necked duck	<i>Aythya collaris</i>
✧ Snowy egret	<i>Egretta thula</i>	Greater scaup	<i>Aythya marila</i>
Little blue heron	<i>Egretta caerulea</i>	Lesser scaup	<i>Aythya affinis</i>
✧ Cattle egret	<i>Bubulcus ibis</i>	Bufflehead	<i>Bucephala albeola</i>
Green heron	<i>Butorides virescens</i>	Common goldeneye	<i>Bucephala clangula</i>
✧ Black-crowned night-heron	<i>Nycticorax nycticorax</i>	Common merganser	<i>Mergus merganser</i>
< Tricolored heron	<i>Egretta tricolor</i>	< Hooded merganser	<i>Lophodytes cucullatus</i>
Ibises and Spoonbills		< Red-breasted merganser	<i>Mergus serrator</i>
✧ White-faced ibis	<i>Plegadis chihi</i>	✧ Ruddy duck	<i>Oxyura jamaicensis</i>
< White ibis	<i>Eudocimus albus</i>	Osprey, Kites, Hawks, and Eagles	
New World Vultures		Osprey	<i>Pandion haliaetus</i>
Turkey vulture	<i>Cathartes aura</i>	Bald eagle	<i>Haliaeetus leucocephalus</i>
Swans, Geese, and Ducks		✧ Northern harrier	<i>Circus cyaneus</i>
Greater white-fronted goose	<i>Anser albifrons</i>	Sharp-shinned hawk	<i>Accipiter striatus</i>
		Cooper's hawk	<i>Accipiter cooperii</i>
		< Northern goshawk	<i>Accipiter gentilis</i>
		✧ Swainson's hawk	<i>Buteo swainsoni</i>
		✧ Red-tailed hawk	<i>Buteo jamaicensis</i>
		Ferruginous hawk	<i>Buteo regalis</i>
		Rough-legged hawk	<i>Buteo lagopus</i>
		Golden eagle	<i>Aquila chrysaetos</i>

<i>Common Name</i>	<i>Scientific Name</i>
Gallinaceous Birds	
◇ Ring-necked pheasant (Introduced)	<i>Phasianus colchicus</i>
Rails	
◇ Virginia rail	<i>Rallus limicola</i>
◇ Sora	<i>Porzana carolina</i>
◇ American coot	<i>Fulica americana</i>
< Purple gallinule	<i>Porphyrio martinicus</i>
< Common gallinule	<i>Gallinula galeata</i>
Cranes	
Sandhill crane	<i>Grus canadensis</i>
Plovers	
Black-bellied plover	<i>Pluvialis squatarola</i>
Semipalmated plover	<i>Charadrius semipalmatus</i>
◇ Killdeer	<i>Charadrius vociferus</i>
Mountain plover	<i>Charadrius montanus</i>
< Snowy plover	<i>Charadrius nivosus</i>
Stilts and Avocets	
◇ Black-necked stilt	<i>Himantopus mexicanus</i>
◇ American avocet	<i>Recurvirostra americana</i>
Sandpipers and Phalaropes	
Greater yellowlegs	<i>Tringa melanoleuca</i>
Lesser yellowlegs	<i>Tringa flavipes</i>
Solitary sandpiper	<i>Tringa solitaria</i>
Willet	<i>Catoptrophorus semipalmatus</i>
◇ Spotted sandpiper	<i>Actitis macularia</i>
< Whimbrel	<i>Numenius phaeopus</i>
Long-billed curlew	<i>Numenius americanus</i>
Marbled godwit	<i>Limosa fedoa</i>
Sanderling	<i>Calidris alba</i>
Western sandpiper	<i>Calidris mauri</i>
Least sandpiper	<i>Calidris minutilla</i>
Baird's sandpiper	<i>Calidris bairdii</i>
Pectoral sandpiper	<i>Calidris melanotos</i>
Stilt sandpiper	<i>Calidris himantopus</i>
Long-billed dowitcher	<i>Limnodromus scolopaceus</i>
◇ Wilson's snipe	<i>Gallinago delicata</i>
◇ Wilson's phalarope	<i>Phalaropus tricolor</i>
Skuas, Jaegers, Gulls, and Terns	
Franklin's gull	<i>Larus pipixcan</i>
Bonaparte's gull	<i>Larus philadelphia</i>
Ring-billed gull	<i>Larus delawarensis</i>
< Caspian tern	<i>Hydroprogne caspia</i>

<i>Common Name</i>	<i>Scientific Name</i>
< Common tern	<i>Sterna hirundo</i>
< Least tern	<i>Sternula antillarum</i>
Forster's tern	<i>Sterna forsteri</i>
> Black tern	<i>Chlidonias niger</i>
Pigeons and Doves	
◇ Rock Dove (Introduced)	<i>Columba livia</i>
Band-tailed pigeon	<i>Columba fasciata</i>
◇ Mourning dove	<i>Zenaida macroura</i>
Eurasian collared-dove (Introduced)	<i>Streptopelia decaocto</i>
Barn Owls	
Barn owl	<i>Tyto alba</i>
Typical Owls	
◇ Great horned owl	<i>Bubo virginianus</i>
> Burrowing owl	<i>Athene cunicularia</i>
Long-eared owl	<i>Asio otus</i>
◇ Short-eared owl	<i>Asio flammeus</i>
Nightjars	
> Common nighthawk	<i>Chordeiles minor</i>
Common poorwill	<i>Phalaenoptilus nuttallii</i>
Swifts	
White-throated swift	<i>Aeronautes saxatalis</i>
Hummingbirds	
Black-chinned hummingbird	<i>Archilochus alexandri</i>
Broad-tailed hummingbird	<i>Selasphorus platycercus</i>
Rufous hummingbird	<i>Selasphorus rufus</i>
Calliope hummingbird	<i>Stellula calliope</i>
Kingfishers	
> Belted kingfisher	<i>Ceryle alcyon</i>
Woodpeckers	
Lewis' woodpecker	<i>Melanerpes lewis</i>
Williamson's sapsucker	<i>Sphyrapicus thyroideus</i>
Red-naped sapsucker	<i>Sphyrapicus nuchalis</i>
Downy woodpecker	<i>Picoides pubescens</i>
Hairy woodpecker	<i>Picoides villosus</i>
Northern flicker	<i>Colaptes auratus</i>
< Red-headed woodpecker	<i>Melanerpes erythrocephalus</i>
Falcons and Caracaras	
◇ American kestrel	<i>Falco sparverius</i>
Merlin	<i>Falco columbarius</i>

<i>Common Name</i>	<i>Scientific Name</i>
Peregrine falcon	<i>Falco peregrinus</i>
Prairie falcon	<i>Falco mexicanus</i>
Tyrant Flycatchers	
Olive-sided flycatcher	<i>Contopus cooperi</i>
◇ Western wood-pewee	<i>Contopus sordidulus</i>
◇ Willow flycatcher	<i>Empidonax traillii</i>
◇ Southwestern willow flycatcher	<i>Empidonax traillii extimus</i>
◇ Say's phoebe	Sayornis saya
< Vermillion flycatcher	<i>Pyrocephalus rubinus</i>
Gray flycatcher	<i>Empidonax wrightii</i>
Cassin's kingbird	<i>Tyrannus vociferans</i>
> Western kingbird	<i>Tyrannus verticalis</i>
Eastern kingbird	<i>Tyrannus tyrannus</i>
Shrikes	
◇ Loggerhead shrike	<i>Lanius ludovicianus</i>
Northern shrike	<i>Lanius excubitor</i>
Vireos	
Warbling vireo	<i>Vireo gilvus</i>
Crows, Jays, and Magpies	
◇ Black-billed magpie	<i>Pica hudsonia</i>
American crow	<i>Corvus brachyrhynchos</i>
Common raven	<i>Corvus corax</i>
Pinyon jay	<i>Gymnorhinus cyanocephalus</i>
Larks	
◇ Horned lark	<i>Eremophila alpestris</i>
Swallows	
◇ Tree swallow	<i>Tachycineta bicolor</i>
Violet-green swallow	<i>Tachycineta thalassina</i>
> Northern rough-winged swallow	<i>Stelgidopteryx serripennis</i>
< Purple martin	<i>Progne subis</i>
Bank swallow	<i>Riparia riparia</i>
◇ Cliff swallow	<i>Petrochelidon pyrrhonota</i>
◇ Barn swallow	<i>Hirundo rustica</i>
Titmice and Chickadees	
Black-capped chickadee	<i>Poecile atricapilla</i>
Mountain chickadee	<i>Poecile gambeli</i>
Nuthatches	
White-breasted nuthatch	<i>Sitta carolinensis</i>
Wrens	
Rock wren	<i>Salpinctes obsoletus</i>

<i>Common Name</i>	<i>Scientific Name</i>
◇ House wren	<i>Troglodytes aedon</i>
◇ Marsh wren	<i>Cistothorus palustris</i>
Kinglets	
Ruby-crowned kinglet	<i>Regulus calendula</i>
Thrushes	
Western bluebird	<i>Sialia mexicana</i>
Mountain bluebird	<i>Sialia currucoides</i>
Swainson's thrush	<i>Catharus ustulatus</i>
◇ American robin	<i>Turdus migratorius</i>
Mimic Thrushes	
Northern mockingbird	<i>Mimus polyglottos</i>
◇ Sage thrasher	<i>Oreoscoptes montanus</i>
< Brown thrasher	<i>Toxostoma rufum</i>
Gray catbird	<i>Dumetella carolinensis</i>
Starlings	
◇ European starling (Introduced)	<i>Sturnus vulgaris</i>
Wagtails and Pipits	
American pipit	<i>Anthus rubescens</i>
Wood Warblers	
◇ Yellow warbler	<i>Dendroica petechia</i>
Yellow-rumped warbler	<i>Dendroica coronata</i>
Townsend's warbler	<i>Dendroica townsendi</i>
Northern water-thrush	<i>Seiurus noveboracensis</i>
MacGillivray's warbler	<i>Oporornis tolmiei</i>
◇ Common yellowthroat	<i>Geothlypis trichas</i>
Wilson's warbler	<i>Wilsonia pusilla</i>
< Orange-crowned warbler	<i>Oreothlypis celata</i>
< Black-and-white warbler	<i>Mniotilta varia</i>
< Prothonotary warbler	<i>Protonotaria citrea</i>
< Hooded warbler	<i>Setophaga citrina</i>
Tanagers	
Western tanager	<i>Piranga ludoviciana</i>
Sparrows and Towhees	
Green-tailed towhee	<i>Pipilo chlorurus</i>
Spotted towhee	<i>Pipilo maculatus</i>
Cassin's sparrow	<i>Aimophila cassinii</i>
American tree sparrow	<i>Spizella arborea</i>
Chipping sparrow	<i>Spizella passerina</i>

Common Name	Scientific Name
◇ Brewer's sparrow	<i>Spizella breweri</i>
◇ Vesper sparrow	<i>Pooecetes gramineus</i>
Lark sparrow	<i>Chondestes grammacus</i>
Black-throated sparrow	<i>Amphispiza bilineata</i>
Lincoln's sparrow	<i>Melospiza lincolni</i>
Sage sparrow	<i>Amphispiza belli</i>
Lark bunting	<i>Calamospiza melanocorys</i>
◇ Savannah sparrow	<i>Passerculus sandwichensis</i>
Grasshopper sparrow	<i>Ammodramus savannarum</i>
◇ Song sparrow	<i>Melospiza melodia</i>
◇ White-crowned sparrow	<i>Zonotrichia leucophrys</i>
< Swamp sparrow	<i>Melospiza georgiana</i>
Dark-eyed junco	<i>Junco hyemalis</i>
< Lapland longspur	<i>Calcarius lapponicus</i>
Cardinals, Grosbeaks, and Allies	
Black-headed grosbeak	<i>Pheucticus melanocephalus</i>
Blue grosbeak	<i>Guiraca caerulea</i>
< Indigo bunting	<i>Passerina cyanea</i>
Blackbirds and Orioles	
Bobolink	<i>Dolichonyx oryzivorus</i>
◇ Red-winged blackbird	<i>Agelaius phoeniceus</i>
◇ Western meadowlark	<i>Sturnella neglecta</i>
◇ Yellow-headed blackbird	<i>Xanthocephalus xanthocephalus</i>
◇ Brewer's blackbird	<i>Euphagus cyanocephalus</i>
Great-tailed grackle	<i>Quiscalus mexicanus</i>
◇ Brown-headed cowbird	<i>Molothrus ater</i>
◇ Bullock's oriole	<i>Icterus bullockii</i>
< Orchard oriole	<i>Icterus spurius</i>
Finches	
Gray-crowned rosy-finch	<i>Leucosticte tephrocotis</i>
Cassin's finch	<i>Carpodacus cassinii</i>
◇ House finch	<i>Carpodacus mexicanus</i>
Pine siskin	<i>Carduelis pinus</i>
Lesser goldfinch	<i>Carduelis psaltria</i>
> American goldfinch	<i>Carduelis tristis</i>
Old World Sparrows	
House sparrow (Introduced)	<i>Passer domesticus</i>

Common Name	Scientific Name
Mammals	
◇ Breeding species on complex	
Insectivores	
◇ Masked shrew	<i>Sorex cinereus</i>
◇ Montane shrew	<i>Sorex monticolus</i>
◇ Water shrew	<i>Sorex palustris</i>
Bats	
Western small-footed myotis	<i>Myotis ciliolabrum</i>
Long-eared myotis	<i>Myotis evotis</i>
Little brown myotis	<i>Myotis lucifugus</i>
Yuma myotis	<i>Myotis yumanensis</i>
Hoary bat	<i>Lasiurus cinereus</i>
Silver-haired bat	<i>Lasionycteris noctivagans</i>
Big brown bat	<i>Eptesicus fuscus</i>
Townsend's big-eared bat	<i>Plecotus townsendii</i>
Brazilian free-tailed bat	<i>Tadarida brasiliensis</i>
Lagomorphs	
◇ Desert cottontail	<i>Sylvilagus audubonii</i>
◇ Mountain cottontail	<i>Sylvilagus nuttallii</i>
◇ White-tailed jackrabbit	<i>Lepus townsendii</i>
Rodents	
◇ Least chipmunk	<i>Tamias minimus</i>
Yellow-bellied marmot	<i>Marmota flaviventris</i>
◇ Thirteen-lined ground squirrel	<i>Spermophilus tridecemlineatus</i>
Wyoming ground squirrel	<i>Urocitellus elegans</i>
Gunnison's prairie dog	<i>Cynomys gunnisoni</i>
◇ Botta's pocket gopher	<i>Thomomys bottae</i>
◇ Northern pocket gopher	<i>Thomomys talpoides</i>
◇ Plains pocket mouse	<i>Perognathus flavescens</i>
◇ Silky pocket mouse	<i>Perognathus flavus</i>
◇ Ord's kangaroo rat	<i>Dipodimys ordii</i>
◇ Western harvest mouse	<i>Reithrodontomys megalotis</i>
◇ Deer mouse	<i>Peromyscus maniculatis</i>
◇ Northern grasshopper mouse	<i>Onychomys leucogaster</i>
◇ House mouse	<i>Mus musculus</i>

Common Name	Scientific Name
◇ Western jumping mouse	<i>Zapus princeps</i>
◇ Long-tailed vole	<i>Microtus longicaudus</i>
◇ Montane vole	<i>Microtus montanus</i>
◇ Meadow vole	<i>Mecrotus pennsylvanicus</i>
◇ Muskrat	<i>Ondatra zibethicus</i>
◇ American beaver	<i>Castor canadensis</i>
◇ Common porcupine	<i>Erethizon dorsatum</i>
Carnivores	
◇ Coyote	<i>Canis latrans</i>
◇ Red fox	<i>Vulpes vulpes</i>
Gray fox	<i>Urocyon cinereoargenteus</i>
Black bear	<i>Ursus americanus</i>
◇ Common raccoon	<i>Procyon lotor</i>
Short-tailed weasel	<i>Mustela erminea</i>
◇ Long-tailed weasel	<i>Mustela frenata</i>
Mink	<i>Mustela vison</i>
◇ American badger	<i>Taxidea taxus</i>
Western spotted skunk	<i>Spilogale gracilus</i>
◇ Striped skunk	<i>Mephitis mephitis</i>
Mountain lion	<i>Felis concolor</i>
Bobcat	<i>Lynx rufus</i>
Ungulates	
◇ American elk	<i>Cervus elaphus</i>
◇ Mule deer	<i>Odocoileus hemionus</i>
White-tailed deer	<i>Odocoileus virginianus</i>
Pronghorn	<i>Antilocapra Americana</i>
Reptiles	
Snapping turtle	<i>Chelydra serpentina</i>
Short-horned lizard	<i>Phrynosoma douglassii</i>
Eastern fence lizard	<i>Sceloporous undulatus</i>
Variable skink	<i>Eumeces gaigeae</i>
Milk snake	<i>Lampropeltis triangulum</i>
Bullsnake	<i>Pituophis melnoleucus</i>
Western terrestrial garter snake	<i>Thamnophis elegans</i>
Common garter snake	<i>Thamnophis sirtalis</i>
Western rattlesnake	<i>Crotalus viridis</i>
Smooth green snake	<i>Opheodrys vernalis</i>
Amphibians	
Tiger salamander	<i>Ambystoma tigrinum</i>
Plains spadefoot	<i>Scaphiopus bombifrons</i>
Western toad	<i>Bufo boreas</i>
Great Plains toad	<i>Bufo cognatus</i>

Common Name	Scientific Name
Woodhouse's toad	<i>Bufo woodhousii</i>
Western chorus frog	<i>Pseudacris triseriata</i>
Bullfrog	<i>Rana catesbeiana</i>
Northern leopard frog	<i>Rana pipiens</i>
Fish	
Northern pike	<i>Esox lucius</i>
Brown trout	<i>Salmo trutta</i>
Black bullhead	<i>Ameiurus melas</i>
Rio Grande sucker	<i>Catostomus plebeius</i>
Rio Grande chub	<i>Gila pandora</i>
Fathead minnow	<i>Pimephales promelas</i>
Longnose dace	<i>Rhinichthys cataractae</i>
White sucker	<i>Catostomus commersonii</i>
Common carp	<i>Cyprinus carpio</i>
Tench	<i>Tinca tinca</i>
Vegetation	
Agavaceae	
Yucca	<i>Yucca</i> spp.
Aizoaceae	
Verrucose seapurslane	<i>Sesuvium verruosum</i>
Alismataceae	
Arrowhead	<i>Sagittaria cuneata</i>
Northern water plantain	<i>Alisma</i> cf.
Alsinaceae	
Longleaf starwort	<i>Stellaria longifolia</i>
Alliaceae	
Wild onion/garlic	<i>Allium</i> spp.
Amaranthaceae	
Rough pigweed	<i>Amaranthus retroflexus</i>
Mat amaranth	<i>Amaranthus blitoides</i>
Anacardiaceae	
Skunkbush sumac	<i>Rhus aromatica</i>
Apiaceae	
Rocky Mountain hemlock-parsley	<i>Conioselinum scopulorum</i>
Common cowparsnip	<i>Heracleum sphondylium</i>
Hemlock waterparsnip	<i>Sium suave</i>
Asclepiadaceae	
Showy milkweed	<i>Asclepias speciosa</i>
Swamp milkweed	<i>Asclepias incarnata</i>
Asparagaceae	
Garden asparagus-fern	<i>Asparagus officinalis</i>
Starry false lily of the valley	<i>Maianthemum stellatum</i>

<i>Common Name</i>	<i>Scientific Name</i>
Asteraceae	
Aster species	<i>Aster</i> spp.
Canada thistle	<i>Cirsium arvense</i>
Common cocklebur	<i>Xanthium strumarium</i>
Common mare's-tail	<i>Hippuris vulgaris</i>
Common sagewort	<i>Artemisia campestris</i>
Dandelion	<i>Taraxacum officinale</i>
Fringed sage	<i>Artemisia frigida</i>
Horseweed	<i>Conyza canadensis</i>
Marsh sowthistle	<i>Sonchus arvensis</i>
Povertyweed	<i>Iva axillaris</i>
Rabbitbrush	<i>Chrysothamnus nauseosus</i>
Russian knapweed	<i>Acroptilon repens</i>
Silver sage	<i>Artemisia cana</i>
Snakeweed	<i>Gutierrezia lucida</i>
Sunflower	<i>Helianthus</i> spp.
Wild lettuce	<i>Lactuca serriola</i>
Yarrow	<i>Achillea millefolium</i>
Common yarrow	<i>Achillea lanulosa</i>
Pale agoseris	<i>Agoseris glauca</i>
Alkali marsh aster	<i>Almutaster pauciflorus</i>
Flatspine bur ragweed	<i>Ambrosia acanthicarpa</i>
Littleleaf pussytoes	<i>Antennaria microphylla</i>
Lesser burdock	<i>Arctium minus</i>
Biennial wormwood	<i>Artemisia biennis</i>
Prairie sagewort	<i>Artemisia frigida</i>
White sagebrush	<i>Artemisia ludoviciana</i>
Nodding beggarticks	<i>Bidens cernua</i>
Slimlobe beggarticks	<i>Bidens tenuisecta</i>
Rubber rabbitbrush	<i>Chrysothamnus nauseosus</i>
Prairie thistle	<i>Cirsium canescens</i>
Parry's thistle	<i>Cirsium parryi</i>
Purple aster	<i>Dieteria biglovii</i>
Running fleabane	<i>Erigeron divergens</i>
Trailing fleabane	<i>Erigeron flagellaris</i>
Beautiful fleabane	<i>Erigeron formosissimus</i>
Streamside fleabane	<i>Erigeron glabellus</i>
White sagebrush	<i>Artemisia ludoviciana</i>
Nodding beggarticks	<i>Bidens cernua</i>
Slimlobe beggarticks	<i>Bidens tenuisecta</i>
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Beautiful fleabane	<i>Erigeron formosissimus</i>
Streamside fleabane	<i>Erigeron glabellus</i>
Western marsh cudweed	<i>Gnaphalium palustre</i>
Marsh cudweed	<i>Gnaphalium uliginosum</i>
Hairy false goldenaster	<i>Heterotheca villosa</i>
Fineleaf hymenopappus	<i>Hymenopappus filifolius</i>
Blue lettuce	<i>Lactuca tatarica</i>
Hall's ragwort	<i>Ligularia bigelovii</i>
Rush skeletonplant	<i>Lygodesmia juncea</i>
Fall tansyaster	<i>Machaeranthera canescens</i>
Smallflower tansyaster	<i>Machaeranthera parviflora</i>
Tanseyleaf tansyaster	<i>Machaeranthera tanacetifolia</i>
False gold groundsel	<i>Packera pseud aurea</i>
Threetooth ragwort	<i>Packera tridenticulata</i>
Fiddleleaf hawksbeard	<i>Psilochenia runcinata</i>
Lanceleaf goldenweed	<i>Pyrrcoma lanceolata</i>
Blackeyed Susan	<i>Rudbeckia hirta</i>
Manyflower false threadleaf	<i>Schkuhria multiflora</i>
Broomlike ragwort	<i>Senecio multicapitatus</i>
Broom groundsel	<i>Senecio spartioides</i>
Canada goldenrod	<i>Solidago canadensis</i>
Missouri goldenrod	<i>Solidago missouriensis</i>
Spiny sowthistle	<i>Sonchus asper</i>
Moist sowthistle	<i>Sonchus uliginosus</i>
Western aster	<i>Symphotrichum ascensens</i>
White heath aster	<i>Symphotrichum ericoides</i>
White prairie aster	<i>Symphotrichum falcatum</i>
Leafy rayless aster	<i>Symphotrichum frondosum</i>
White panicle aster	<i>Symphotrichum lanceolatum</i>
Yellow salsify	<i>Tragopogon dubius</i>
Boraginaceae	
Cryptantha	<i>Cryptantha</i> sp.
Manyflower stickseed	<i>Hackelia floribunda</i>

<i>Common Name</i>	<i>Scientific Name</i>	<i>Common Name</i>	<i>Scientific Name</i>
Seaside heliotrope	<i>Heliotropium curassavicum</i>	Saltlover	<i>Halogeton glomeratus</i>
Flatspine stickseed	<i>Lappula occidentalis</i>	Kochia	<i>Kochia scoparia</i>
James' cryptantha	<i>Oreocarya pustulosa</i>	Lambsquarters	<i>Chenopodium album</i>
Sleeping popcornflower	<i>Plagiobothrys scouleri</i>	Pickleweed	<i>Salicornia rubra</i>
Common comfrey	<i>Symphytum officinale</i>	Pursh seepweed	<i>Suaeda calceoliformis</i>
Brassicaceae		Winterfat	<i>Krascheninnikovia lanata</i>
Herb sophia	<i>Descurainia sophia</i>	Silverscale saltbush	<i>Atriplex argentea</i>
Hoary Cress (small white-top)	<i>Cardaria draba</i>	Twoscale saltbush	<i>Atriplex heterosperma</i>
Peppergrass	<i>Lepidium montanum</i>	Wolf's saltweed	<i>Atriplex wolffi</i>
Tall Whitetop	<i>Lepidium latifolium</i>	Pinyon goosefoot	<i>Chenopodium atrovirens</i>
Tansymustard	<i>Descurainia</i> spp.	Zschack's goosefoot	<i>Chenopodium berlandieri</i>
Rape	<i>Brassica napus</i>	Fremont's goosefoot	<i>Chenopodium fremontii</i>
Shepherd's purse	<i>Capsella bursa-pastoris</i>	Rocky Mountain goosefoot	<i>Chenopodium glaucum</i>
Lenspod whitetop	<i>Cardaria chalepensis</i>	Narrowleaf goosefoot	<i>Chenopodium leptophyllum</i>
Broadleaved pepperweed	<i>Cardaria latifolia</i>	Desert goosefoot	<i>Chenopodium pratericola</i>
Villa grove tansymustard	<i>Descurainia ramosissima</i>	Hairy bugseed	<i>Corispermum villosum</i>
Western wallflower	<i>Erysimum asperum</i>	Winged pigweed	<i>Cycloloma atriplicifolium</i>
Field pepperweed	<i>Lepidium campestre</i>	Slender Russian thistle	<i>Salsola collina</i>
Mesa pepperwort	<i>Lepidium alyssoides</i>	Fetid goosefoot	<i>Teloxys graveolens</i>
Manybranched pepperweed	<i>Lepidium ramosissimum</i>	Cleomaceae	
Spreading yellowcress	<i>Rorippa sinuata</i>	Slender spiderflower	<i>Cleome multicaulis</i>
Southern marsh yellowcress	<i>Rorippa teres</i>	Rocky Mountain bee plant	<i>Cleome serrulata</i>
Tall tumbled mustard	<i>Sisymbrium altissimum</i>	Convolvulaceae	
Flaxleaf plainsmustard	<i>Sisymbrium linifolium</i>	Field bindweed	<i>Convolvulus arvensis</i>
Cactaceae		Cupressaceae	
Prickly pear	<i>Opuntia</i> spp.	Rocky Mountain juniper	<i>Sabina scopulorum</i>
Campanulaceae		Eastern redcedar	<i>Sabina virginiana</i>
Parry's bellflower	<i>Campanula parryi</i>	Cyperaceae	
Cannabaceae		Hardstem bulrush	<i>Schoenoplectus acutus</i>
Common hop	<i>Humulus lupulus</i>	Nebraska sedge	<i>Carex nebrascensis</i>
Caprifoliaceae		Nevada bulrush	<i>Scirpus nevadensis</i>
Honeysuckle	<i>Lonicera</i> sp.	Sedge spp.	<i>Carex</i> spp.
Tatarian honeysuckle	<i>Lonicera tatarica</i>	Softstem bulrush	<i>Schoenoplectus tabernaemontani</i>
Caryophyllaceae		Spikerush	<i>Eleocharis</i> spp.
Chickweed	<i>Cerastium</i> spp.	Common three-Square	<i>Schoenoplectus pungens</i>
Drummond's campion	<i>Silene drummondii</i>	Bearded flatsedge	<i>Cyperus aristatus</i>
Chenopodiaceae		Panicled bulrush	<i>Scirpus microcarpus</i>
Russian thistle	<i>Salsola iberica</i>	Cloaked bulrush	<i>Scirpus pallidus</i>
Four-wing saltbush	<i>Atriplex canescens</i>	Elaeagnaceae	
Goosefoot	<i>Chenopodium murale</i>	Russian olive	<i>Elaeagnus angustifolia</i>
Greasewood	<i>Sarcobatus vermiculatus</i>	Equisetaceae	
		Field horsetail	<i>Equisetum arvensis</i>
		Smooth horsetail	<i>Equisetum laevigata</i>

Common Name	Scientific Name
Scouring rush	<i>Equisetum hyemale</i>
Horsetail	<i>Equisetum</i> spp.
Euphorbiaceae	
Spotted spurge	<i>Euphorbia maculate</i>
Ribseed sandmat	<i>Chamaesyce glyptosperma</i>
Thymeleaf sandmat	<i>Chamaesyce serpyllifolia</i>
Rocky Mountain spurge	<i>Tithymalus brachyceras</i>
Fabaceae	
American vetch	<i>Vicia americana</i>
Purple locoweed	<i>Oxytropis lambertii</i>
Mountain goldenbanner	<i>Thermopsis montana</i>
Goldenbanner	<i>Thermopsis rhombifolia</i>
Alkali swainsonpea	<i>Sphaerophysa salsula</i>
Sweet clover	<i>Melilotus officinalis</i>
Wild licorice	<i>Glycyrrhiza lepidota</i>
Alfalfa	<i>Medicago sativa</i>
Clover	<i>Trifolium</i> spp.
Purple Milkvetch	<i>Astragalus agrestis</i>
Bodin's milkvetch	<i>Astragalus bodinii</i>
Painted milkvetch	<i>Astragalus ceramicus</i>
Hall's milkvetch	<i>Astragalus hallii</i>
Siberian peashrub	<i>Caragana arborescens</i>
King's lupine	<i>Lupinus kingii</i>
Black medick	<i>Medicago lupulina</i>
Blue nodding locoweed	<i>Oxytropis deflexa</i>
White locoweed	<i>Oxytropis sericea</i>
Lemon scurfpea	<i>Psoraleidium lanceolatum</i>
Garden vetch	<i>Vicia angustifolia</i>
Fumaraceae	
Scrambled eggs	<i>Corydalis aurea</i>
Gentianaceae	
Gentian	<i>Gentiana detonsa</i>
Pleated gentian	<i>Gentiana affinis</i>
Autumn dwarf gentian	<i>Gentianella strictiflora</i>
Rocky Mountain fringed	<i>Gentiana Gentianopsis thermalis</i>
Geraniaceae	
Redstem stork's bill	<i>Erodium cicutarium</i>
Pineywoods geranium	<i>Geranium caespitosum</i>
Grossulariaceae	
Golden currant	<i>Ribes aureum</i>
Whitestem gooseberry	<i>Ribes inerme</i>
Trumpet gooseberry	<i>Ribes leptanthum</i>

Common Name	Scientific Name
Haloragaceae	
Eurasian watermilfoil	<i>Myriophyllum spicatum</i>
Water milfoil	<i>Myriophyllum exalbes-cens</i>
Hippuridaceae	
Mare's tail	<i>Hippuris vulgaris</i>
Hydrophyllaceae	
Wishbone fiddleleaf	<i>Nama dichotomum</i>
White phacelia	<i>Phacelia alba</i>
Iridaceae	
Wild iris	<i>Iris missouriensis</i>
Stiff blue-eyed grass	<i>Sisyrinchium demissum</i>
Juncaceae	
Baltic rush	<i>Juncus balticus</i>
Toad rush	<i>Juncus bufonius</i>
Inland rush	<i>Juncus interior</i>
Longstyle rush	<i>Juncus longistylis</i>
Rocky Mountain rush	<i>Juncus saximontanus</i>
Torrey's rush	<i>Juncus torreyi</i>
Juncaginaceae	
Seaside arrowgrass	<i>Triglochin maritimum</i>
Slender arrowgrass	<i>Triglochin concinna</i>
Marsh arrowgrass	<i>Triglochin palustris</i>
Lamiaceae	
Field mint	<i>Mentha arvensis</i>
Spearmint	<i>Mentha spicata</i>
Wild mint	<i>Mentha arvensis</i>
Hairy hedgenettle	<i>Stachys palustris</i>
Lemnaceae	
Duckweed	<i>Lemna</i> spp.
Loasaceae	
Bractless blazingstar	<i>Mentzelia nuda</i>
Adonis blazingstar	<i>Nuttallia multiflora</i>
Malvaceae	
Salt spring checkerbloom	<i>Sidalcea neomexicana</i>
Scarlet globemallow	<i>Sphaeralcea coccinea</i>
Nyctaginaceae	
Hairy four o'clock	<i>Oxybaphus hirsutus</i>
Narrowleaf four o'clock	<i>Oxybaphus linearis</i>
Heartleaf four o'clock	<i>Oxybaphus nyctagineus</i>
Smallflower sandverbena	<i>Tripterocalyx micranthus</i>
Oleaceae	
Common lilac	<i>Syringa vulgaris</i>

<i>Common Name</i>	<i>Scientific Name</i>	<i>Common Name</i>	<i>Scientific Name</i>
Onagraceae		Prairie wedgegrass (Reedgrass)	<i>Spenopholis obtusata</i>
Yellow evening-primrose	<i>Oenothera flava</i>	Rabbitfoot grass	<i>Polypogon monspeliensis</i>
Fringed willowherb	<i>Epilobium ciliatum</i>	Reed canarygrass	<i>Phalaris arundinaceae</i>
Crownleaf evening-primrose	<i>Oenothera coronopifolia</i>	Reedgrass	<i>Calimagrostis neglecta</i>
Pale evening-primrose	<i>Oenothera pallida</i>	Saltgrass	<i>Distichlis spicata</i>
Hairy evening-primrose	<i>Oenothera villosa</i>	Sand dropseed	<i>Sporobolus cryptandrus</i>
Orchidaceae		Sandhill muhly	<i>Muhlenbergia pungens</i>
Northern green orchid	<i>Platanthera aquilonis</i>	Short-awn foxtail	<i>Alopecurus aequalis</i>
Orobanchaceae		Slender wheatgrass	<i>Agropyron trachycaulum</i>
Louisiana broomrape	<i>Orobanche ludoviciana</i>	Slimstem reedgrass	<i>Calamagrostis neglecta</i>
Yellow owl's-clover	<i>Orthocarpus luteus</i>	Sloughgrass	<i>Beckmannia syzigachne</i>
Phrymaceae		Spike bentgrass	<i>Agrostis exarata</i>
Roundleaf monkeyflower	<i>Mimulus glabratus</i>	Spikedropseed	<i>Sporobolus contractus</i>
Pinaceae		Squirrel tail	<i>Elymus elymoides</i>
Engelmann spruce	<i>Picea engelmannii</i>	Timothy	<i>Phleum pratense</i>
Blue spruce	<i>Picea pungens</i>	Tufted hairgrass	<i>Deschampsia cespitosa</i>
Plantaginaceae		Weeping alkaligrass	<i>Puccinellia distans</i>
Common plantain	<i>Plantago major</i>	Western wheatgrass	<i>Pascopyrum smithii</i>
Nodding buckwheat	<i>Eriogonum cernuum</i>	Sleepygrass	<i>Achnatherum robustum</i>
Longroot smartweed	<i>Persicaria amphibia</i>	Crested wheatgrass	<i>Agropyron cristatum</i>
Curlytop knotweed	<i>Persicaria lapathifolia</i>	Redtop	<i>Agrostis gigantea</i>
Redwool plantain	<i>Plantago eriopoda</i>	Shortawn foxtail	<i>Alopecurus aequalis</i>
Oval-leaf knotweed	<i>Polygonum arenastrum</i>	Creeping meadow foxtail	<i>Alopecurus arundinaceus</i>
Silversheath knotweed	<i>Polygonum argyrocoleon</i>	Purple threeawn	<i>Aristida purpurea</i>
Poaceae		American sloughgrass	<i>Beckmannia syzigachne</i>
Alkali cordgrass	<i>Spartina gracilis</i>	Smooth brome	<i>Bromopsis inermis</i>
Alkali muhly	<i>Muhlenbergia asperifolia</i>	Cheatgrass	<i>Bromus tectorum</i>
Alkali sacaton	<i>Sporobolus airoides</i>	Slimstem reedgrass	<i>Calamagrostis stricta</i>
Barnyard grass	<i>Echinochloa crusgalli</i>	Blue grama	<i>Chondrosium gracile</i>
Beardless wildrye	<i>Leymus triticoides</i>	Foxtail barley	<i>Critesion jubatum</i>
Blue grama	<i>Bouteloua gracilis</i>	MacKenzie's hairgrass	<i>Deschampsia caespitosa</i>
Bluejoint reedgrass	<i>Calamagrostis canadensis</i>	Saltgrass	<i>Distichlis stricta</i>
Brome spp.	<i>Bromus</i> spp.	Quackgrass	<i>Elytrigia repens</i>
Common rye	<i>Secale cereale</i>	Stinkgrass	<i>Eragrostis cilianensis</i>
Creeping wildrye	<i>Elymus triticoides</i>	American mannagrass	<i>Glyceria grandis</i>
Foxtail barley	<i>Hordeum jubatum</i>	Needle and thread	<i>Hesperostipa comata</i>
Grass spp.	<i>Gramanacea</i> spp.	Prairie Junegrass	<i>Koeleria macrantha</i>
Indian ricegrass	<i>Oryzopsis hymenoides</i>	False buffalograss	<i>Monroa squarrosa</i>
Johnsongrass	<i>Sorghum halipense</i>	Scratchgrass	<i>Muhlenbergia asperifolia</i>
Mat muhly	<i>Muhlenbergia richardsonis</i>	Pullup muhly	<i>Muhlenbergia filiformis</i>
Nuttall's alkali grass	<i>Puccinellia nuttalliana</i>	Annual muhly	<i>Muhlenbergia minutissima</i>
Phragmites	<i>Phragmites australis</i>	Witchgrass	<i>Panicum capillare</i>
		Canada bluegrass	<i>Poa compressa</i>

<i>Common Name</i>	<i>Scientific Name</i>
Kentucky bluegrass	<i>Poa pratensis</i>
Sand dropseed	<i>Sporobolus cryptandrus</i>
Polemoniaceae	
Scarlet gilia	<i>Ipomopsis aggregata</i>
Flaxflowered ipomopsis	<i>Ipomopsis longiflora</i>
Polygonaceae	
Curly dock	<i>Rumex crispus</i>
Erect knotweed	<i>Polygonum erectum</i>
Smartweed	<i>Polygonum amphibium</i>
Western dock	<i>Rumex occidentalis</i>
Mexican dock	<i>Rumex triangulivalvis</i>
Portulacaceae	
Little hogweed	<i>Portulaca oleracea</i>
Potamogetonaceae	
Horned pondweed	<i>Zannichellia palustris</i>
Pondweed	<i>Potamogeton</i> spp.
Sago pondweed	<i>Potamogeton pectinatus</i>
Primulaceae	
Sea milkwort	<i>Glaux maritima</i>
Ranunculaceae	
Buttercup	<i>Ranunculus cymbalaria</i>
Western white clematis	<i>Clematis ligusticifolia</i>
Threadleaf crowfoot	<i>Ranunculus aquatilis</i>
Macoun's buttercup	<i>Ranunculus macounii</i>
Rhamnaceae	
Common buckthorn	<i>Rhamnus cathartica</i>
Rosaceae	
Herbaceous cinquefoil	<i>Potentilla nivea</i>
Silverweed cinquefoil	<i>Argentina anserine</i>
Apple	<i>Malus</i>
Paradox cinquefoil	<i>Potentilla paradoxa</i>
Platte River cinquefoil	<i>Potentilla plattensis</i>
Woods' rose	<i>Rosa woodsii</i>
Rubiaceae	
Northern bedstraw	<i>Galium boreale</i>
Salicaceae	
Coyote willow	<i>Salix exigua</i>
Crack willow	<i>Salix fragilis</i>
Narrow-leaf cottonwood	<i>Populus angustifolia</i>
Peach-leaf willow	<i>Salix amygladoides</i>
Plains cottonwood	<i>Populus deltoides</i>
Lombardy poplar	<i>Populus nigra</i>
Quaking aspen	<i>Populus tremuloides</i>
Strapleaf willow	<i>Salix ligulifolia</i>

<i>Common Name</i>	<i>Scientific Name</i>
Greenleaf willow	<i>Salix lucida</i>
Santalaceae	
Pale bastard toadflax	<i>Comandra umbellata</i>
Scrophulariaceae	
Water speedwell	<i>Veronica anagallis-aquat-ica</i>
Neckweed	<i>Veronica peregrina</i>
Butter and eggs	<i>Linaria vulgaris</i>
Meadow lousewort	<i>Pedicularis crenulata</i>
Oneside penstemon	<i>Penstemon virgatus</i>
Common mullein	<i>Verbascum thapsus</i>
Solanaceae	
Matrimony vine	<i>Lycium barbarum</i>
Cutleaf nightshade	<i>Solanum triflorum</i>
Sparganiaceae	
Giant Bur-reed	<i>Sparganium eurycarpum</i>
Tamaricaceae	
Matrimony vine	<i>Lycium barbarum</i>
Cutleaf nightshade	<i>Solanum triflorum</i>
Saltcedar	<i>Tamarix ramosissima</i>
Typha	
Cattail	<i>Typha latifolia</i>
Ulmaceae	
Siberian elm	<i>Ulmus pumila</i>
Urticaceae	
Stinging nettle	<i>Urtica gracilis</i>
Valerianaceae	
Tobacco root	<i>Valeriana edulis</i>
Verbenaceae	
Bigbract verbena	<i>Verbena bracteata</i>
Vitaceae	
Virginia creeper	<i>Parthenocissus quinque-fo-ly</i>
Zygophyllaceae	
Puncturevine	<i>Tribulus terrestris</i>

Appendix G

Responses to Comments on the Draft CCP and EIS

G.1 Introduction

Appendix G is a companion document to the Final CCP and EIS and includes the following components:

- Copies of written comments from Federal, State, and local government agencies and organizations, with responses to those comments
- A summary of comments from individuals and responses to individual comments

The draft CCP and EIS (DEIS) was released to the public for review and comment on August 26, 2014. The 60-day comment period for the document closed on October 27, 2014. We also held public meetings in Alamosa, Colorado, on September 29, 2014; Monte Vista, Colorado, on September 30, 2014; and Moffat, Colorado, on October 1, 2014. During the comment period, we received more than 340 comments from 35 individual submittals (primarily emails, letters, and verbal comments during public meetings); 14 letters from Federal, State, local, and tribal government agencies and organizations; and two petitions (form letters).

The primary purpose of this appendix is to address the substantive comments received on the DEIS. As defined by the compliance guidelines for the National Environmental Policy Act (NEPA), comments are considered substantive if they:

- Question, with reasonable basis, the accuracy of the information in the document
- Question, with reasonable basis, the adequacy of the environmental analysis
- Present reasonable alternatives other than those presented in the environmental impact statement
- Cause changes or revisions in the proposal

The comments and responses are divided into two sections. The first section includes copies of the com-

ments made by Federal, State, local, and tribal government agencies as well as tax-exempt, non-profit organizations. The second section includes a summary of the comments made by the general public or other entities, including both written comments and comments made at one of the three public meetings.

In compliance with the spirit of the Privacy Act of 1974, it is the policy of Region 6 to not routinely publish names, addresses, or other personal information of individuals (agencies and organizations are excluded from this policy). Rather than print every letter from individuals and redact (black out) all personal information, and because many of the comments are similar, we have summarized the comments received and tracked the number of individuals who made each general comment. This approach is also consistent with the Paperwork Reduction Act of 1995.

We responded to each of the substantive individual comments. Where appropriate, the text of the Final CCP and EIS (FEIS) has been revised to address comments. Some of the comments do not meet the definition of “substantive,” as defined above. In some instances where the public displayed a strong interest, we have chosen to respond to specific nonsubstantive comments.

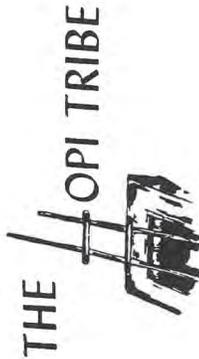
Responses to Agency, Tribal, and Organization Comments

We received formal comments from the following Federal, State, local, and tribal government agencies and organizations:

1. Hopi Tribe
2. Navajo Nation
3. USDA Forest Service
4. National Park Service
5. U.S. Environmental Protection Agency
6. Colorado Department of Natural Resources:
 - (a) Colorado Parks and Wildlife and
 - (b) Colorado Division of Water Resources
7. History Colorado
8. Crestone Creative District
9. Defenders of Wildlife

10. Friends of the San Luis Valley National Wildlife Refuges
11. Mount Blanca Habitat Partnership Program
12. The Nature Conservancy
13. San Luis Valley Ecosystem Council
14. Wildlife Conservation Society

Letters from these agencies and organizations are shown in the following pages. Next to each reproduced letter is our response, numbered to correspond to specific comments in the letter.



Herman G. Honanic
CHAIRMAN
Alfred Lonkabanhu Jr.
VICE-CHAIRMAN

September 15, 2014

Will Meeks, Assistant Regional Director
Attention: Laurie Shannon, Planning Team Leader
U.S. Fish and Wildlife Service, Division of Refuge Planning
P.O. Box 25484
Denver, Colorado 80225-0486

Re: Draft Comprehensive Conservation Plan, San Luis Valley National Wildlife Refuge Complex:
Alamosa, Baca, and Monte Vista National Wildlife Refuges

Dear Mr. Meeks,

1-1

Thank you for your correspondence with an enclosed Draft Comprehensive Conservation Plan, San Luis Valley National Wildlife Refuge Complex: Alamosa, Baca, and Monte Vista National Wildlife Refuges. The Hopi Tribe claims cultural affiliation to earlier identifiable cultural groups in southwestern Colorado. The Hopi Cultural Preservation Office supports the identification and avoidance of our ancestral sites and Traditional Cultural Properties, and we consider the archaeological sites of our ancestors to be “footprints” and Traditional Cultural Properties. Therefore, we appreciate the U.S. Fish and Wildlife Service’s continuing solicitation of our input and your efforts to address our concerns.

1-2

The Hopi Cultural Preservation Office has previously opposed energy development within the Baca National Wildlife Refuge. We have now reviewed the draft comprehensive conservation plan and environmental impact statement. We do not support Alternative B-Wildlife Populations, Strategic Habitat Restoration, and Enhanced Public Uses, the Draft Proposed Action, and Alternative D-Maximize Public Use Opportunities, because expanding public access, trails and auto tour routes may undermine the purpose of the refuges, wildlife.

1-3

We believe wildlife refuges should be for wildlife and not public use opportunities. Therefore, we support Alternative C-Habitat Restoration and Ecological Processes which addresses the purposes of the refuges. Should you have any questions or need additional information, please contact Terry Morgart at the Hopi Cultural Preservation Office. Thank you again for your consideration.

Respectfully,

Terry Morgart, Director
Hopi Cultural Preservation Office

cc: Colorado State Historic Preservation Office

P.O. Box 123

KYKOTSMOVI, AZ 86039

(928) 734-3000

1-1. We welcome the Hopi Tribe’s assistance in identifying any ancestral sites and traditional cultural properties that are located within the refuge complex. We have added additional text in the document describing the importance of oral traditions, ancestral sites, and traditional cultural properties to the tribes, and we have further emphasized the need to obtain better survey information on cultural sites and the need to protect these important resources.

1-2. Opening portions of Baca Refuge to wildlife-dependent public uses and making improvements to the existing public use opportunities on Alamosa and Monte Vista Refuges is consistent with the guidance Congress set forth in the Improvement Act of 1997. Implementation of these opportunities and programs is contingent upon having the staff resources to monitor and protect wildlife and cultural resources. Regardless of the final alternative selected, any public use or economic use must be compatible with the legislative purposes of the refuges.

1-3. Thank you for your comments and we look forward to working with the Hopi Tribe in the future.



THE NAVAJO NATION

Historic Preservation Department, P.O. 4060, Window Rock, AZ 86515 • P.O. 928,871,7198 • FAX: 928,871,7886

BEN SHELLY
PRESIDENT

November 21, 2014

REX LEE JIM
VICE-PRESIDENT

Laurie Shannon,
Planning Team Leader
US Fish and Wildlife
Division of Refuge Planning
PO BOX 25484
Denver, CO 80225-0486

Dear Ms. Shannon:

The Historic Preservation Department – Traditional Culture Program (hereafter, HPD-TCP) received the proposed United States Department of the Interior-Fish and Wildlife Services, Draft Comprehensive Conservation Plan and Environmental Impact Statement for the San Luis Valley National Wildlife Refuge Complex.

The Navajo Nation prefers the Draft Proposed Action, **ALTERNATIVE B**. With this preference there will be a maintaining and restoring of natural and modified habitats within the refuge complex.

The Navajo Nation has voiced their affiliation to prehistoric cultures for years. The Navajo Nation has recommendations and clarifications with the following management areas:

Chapter 1: Purpose and Need for Action.

The Navajo Nation has concerns on the three refuge areas that are being considered. Navajo chanters and Navajo families come to the San Luis Valley to conduct ceremonies. Will the refuge area be able to accommodate tribal delegations that request to have access to areas that are designated as refuge areas? Navajo chanters have deep concerns with land management of the area. The forest service has issued a Travel Management Plan that has severely altered areas that were accessed by Navajo chanters and tribal members. Designated refuge areas need to consider how to accommodate tribal requests to conduct ceremonies.

If the refuge areas are willing to collaborate with the Navajo Nation, we would like to be the lead on all cultural ceremonies and offerings. And to request we be the liaison between Navajo chanters and the refuge coordinators. Navajo chanters would feel more comfortable if the Traditional Culture Program was present or be the negotiating team to allow access to sacred areas to conduct offerings or ceremonies on behalf of the Navajo Nation.

2-1

2-2

2-3

2-1. Thank you for your comment in support of alternative B.

2-2. We would be able to accommodate your request for access to areas that are important to the Navajo Nation for cultural ceremonies and offerings. The best way to accomplish this would be for you to obtain a special use permit. The permit would be approved at the local level by the refuge manager. It would not be intended as an encumbrance on your tribal members, but would serve as a communication tool between the Navajo Nation and our refuge staff. Logistics could be arranged in advance and there would be common understanding by everyone on when and how access would occur.

2-3. We look forward to discussing with the Navajo Nation possible ceremonies and offerings on the refuges. As we work with different cultural groups, we expect each group will wish to serve as lead representatives for ceremonies and events involving their people.

2-4

Chapter 4.4: Human History and Cultural Resources

The San Luis Valley is mentioned in the Blessing Way Ceremony, the Night Way Ceremony, the Mountain Top Way Ceremony and the journey of the twins as a starting point for their journey to visit the sun. The Navajo creation story mentions the San Luis Valley as a stopping point for Changing Woman's Western Water Clans on their journey back to Huerfano Mountain. The Navajo Nation is affiliated to the area through Navajo oral and ceremonial history. The San Luis Valley is a unique area. Navajo oral history talks of areas within the Valley where the people dwelled when the immortal holy deities still occupied the earth.

The Navajo war twins were born to rid the earth of monsters that roam the earth disrupting life for all those on earth. The Twins were told by Spiderwoman who their father is and that he would be the one to help destroy the monsters. Spiderwoman gave the Twins an eagle plume that would protect them on their journey. She taught them protection prayers and songs that would protect them. They returned to the San Luis Valley area to begin their journey because their grandfather, Talking God was living at Mount Blanca. As they began their journey they witnessed many obstacles that tried to prevent them from visiting their father. They promised they would return and destroy these obstacles.

After the Twins visited their father, they obtained weapons that would be used to kill the monsters. The Twins set out for the Killer Reeds (present day Wetlands). They used varieties of lightning bolts to cut the reeds and burn it. After they destroyed the Killer Reeds, the Twins set out to destroy the Sand that Swallows (Great Sand Dunes). After destroying the reeds, the elder twin spoke to the reeds. He told the reed why would it do harm to his people after it help the people to escape the flood in the previous world. The plant was rid of its evil powers. The Navajo people will come here to collect the reed and water for ceremonies so they would heal themselves he told the reed plant. The sand dunes would be used in the Holy Wind Way Chant. Plants and sand collected at the sand dunes would become a sacred entity.

When the protégé was learning the Holy Wind Way Chant, he lived in the vicinity of the Mount Blanca and the San Luis Valley. He learned the prayers, songs, and sandpaintings while he lived in the vicinity. He would make travels back to Chaco Canyon, Mesa Verde, Salmon Ruins, Aztec Ruins and White House in Canyon de Chelle. He would visit areas such as the Colorado River, Green River, Conejos River, the Rio Grande River, Animas River, the La Plata River, and San Juan Rivers, just to name a few.

Navajo oral history of the San Luis Valley begins with the holy deities occupying the land before the earth dwelling people began to multiply. During this time many events occurred that would trace our connections back to the San Luis Valley. Before the San Luis Valley got populated and sacred areas were closed off, the Navajo people came to the area for resources. Navajos were aware of the significant loss of Big Horn Sheep due to introduction of the domesticated sheep. And with the Wetlands and Sand Dunes designated as Department of the Interior land and refuges areas, Navajo can no longer conduct their ceremonies or gather resources.

Navajo ceremonial practitioners would come to the San Luis Valley for capturing eagles for feathers to be used for sacred objects and objects of cultural patrimony. The eagles were caught

2-4. We appreciate the information you have provided about the oral and ceremonial histories related to the San Luis Valley and particularly the refuge complex. We have added additional text to the document describing the importance of oral traditions, ancestral sites, and traditional cultural properties to the tribes, and we have further emphasized the need to obtain better information on cultural sites across the refuge complex and the need to protect these important resources.

and released after chanters collected only what they needed. The eagle catch areas have long been labeled as granaries or pueblo shrines associated with Pueblo tribes. Chanters of the male and female Shooting Way Chants, Life Way Chant, Hail Way Chant, Plume Way Chant and the Flint Way Chant tell of the area of the San Luis Valley. Oral stories tell of how they utilized the wetlands, fauna and fowl. The mountain ranges that surround the San Luis Valley play a vital role in Navajo oral history and religion.

Mount Blanca is one of six sacred mountains to the Navajo people. The mountain has its sacred name, songs and prayers. Navajo chanters come to Mount Blanca for ceremonies and to collect other resources.

The Sangre de Cristo Mountain range is also associated with Navajo oral and ceremonial history. Navajo chanters came to the mountain to conduct offerings for the four seasons to cooperate and provide moisture year round. After the establishment of the forest service, the Navajo people are discrete in doing ceremonies due to being harassed or the public desecrating the rituals.

The area of Monte Vista has major connections with the oral history of the Navajo people when the holy deities still lived among the people. At one time the Navajo people lived in the hills to hunt buffalo. Navajo clans that lived in the vicinity were known for possessing buffalo hides, hooves, horns and other parts of the animal. All of Navajo sacred objects and objects of cultural patrimony are decorated with parts from the buffalo. The buffalo is symbolized in elaborate sandpaintings in the Shooting Way Ceremonies and other ceremonies. But mainly in the Shooting Way Chants (Male and Female). Monte Vista was also the northeastern land boundary claimed by the Navajo tribe in times of war and hostility.

Great Sand Dunes National Park and Reserve plays a major role in Navajo oral and ceremonial history. The Plume Way Chant originates in the San Luis Valley and at the Great Sand Dunes. The chant goes hand in hand with the Twins journey to visit their father and procure weapons to kill the monsters that are occupying the land. Certain plants are found here that are used in the nine day Bead Way Chant, Shooting Way Chant, the Navajo Wind Way Chant, and the Apache Wind Way Chant. After the collection of plants the delegation stopped at others areas mentioned above to collect other plants and minerals and pigment for elaborate sandpaintings. Not only is the San Luis Valley connected to ceremonies but also to the mountains, springs, rivers, and the Great Sand Dunes.

The Rio Grande River is a sacred river. The Rio Grande plays a major role in all nine night ceremonies, The Night Way Chant, Water Way Chant, Eagle Way Chant, Bead Way Chant, Shooting Way (Male and Female), Mountain Way Chant, Red Ant Chant, Flint Way Chant and the Hail Way Chant. Offerings were made to the river before crossing. The river has a sacred name that is accompanied by songs and prayers. The river has healing powers and at the same times it has the power to bring death and sorrow.

The Rio Grande corridor was used in warfare ceremonies and raids. Navajo warriors conducted ceremonies at the shores of the river before crossing. And the corridor was used to raid Pueblo tribes and other enemy tribes. In 1628, Fray Alonso de Benavides was the first European to

distinguish the territory of the Navajo, Ute, Commanche and Apache bands. And he acknowledges the corridor was used by the Navajo.

The Conejos River is a sacred river that is connected with Mount Hesperus in Mancos, Colorado. Mount Hesperus is the fourth sacred mountain of the Navajo people. The Conejos River and peak play major roles in all ceremonies. Water was once collected for ailments or to be used in basket drums. The Conejos Peak is mentioned in the Night Way and Mountain Way Chants as the place that was occupied by the Female Tracking Bear. And it was the foot race route between the holy people and the animals in the Hail Way Chant. Navajo clans trace their origins back to Conejos Peak before they began to build settlement areas at Mesa Verde, Salmon Ruins and Aztec Ruins. Changing Woman's people mentioned the Conejos River and Peak in their journey searching out Navajo clans that affiliated themselves with the now abandoned ruins throughout the southwest.

The Navajo Nation has many stories to share but what was mentioned is just a general descriptive of our oral history and ceremonial history. Navajo occupied the San Luis Valley area and utilized the area for its resources and connection to other enemy tribes. Despite the hostilities between the Navajo and other tribes such as the Ute, Commanche, Kiowa, Arapaho and other tribes there was a neutral place that brought them together for trading and intermarriage.

In closing, the Navajo Nation has affiliation to many of the areas that are under the management of the Forest Service, National Park Service and other land managing agencies. In the future we recommend more consultation with the Navajo tribe when developing such areas. What was mentioned in this letter is not even ten percent of what really is out there the Navajo Nation has concerns with.

If the proposed project inadvertently discovers Navajo habitation sites, plant gathering areas, human remains and objects of cultural patrimony, the HPD-TCP request that we be notified respectively in accordance with the Native America Graves Protection and Repatriation Act (NAGPRA). *The Navajo Nation claims cultural affiliation to all Anasazi people (periods from Archaic to Pueblo II) of the southwest. The Navajo Nation makes this claim through Navajo oral history and ceremonial history, which has been documented as early as 1880 and taught from generation to generation.*

In conclusion, the HPD-TCP appreciates the U.S. Fish and Wildlife Service for consulting the Navajo Nation pursuant to 36 CFR 800.1 (c)(2)(iii). If you have any questions, concerns, or require additional information, do not hesitate to contact me at 928-871-7750. Thank you for your cooperation.

Sincerely,


Tony H. Joe, Jr., Supervisory Anthropologist
Traditional Culture Program
Historic Preservation Department

Cc: JCP 14-246

United States Fish and Wildlife

2-5

2-5. We will consult with the Navajo Nation if Navajo habitation sites, plant gathering areas, human remains, or objects of cultural patrimony are discovered.

2-6

2-6. Thank you for your comments. We look forward to working with the Historic Preservation Department's Traditional Culture Program for the Navajo Nation.

 United States Department of Agriculture	Forest Service	Rio Grande National Forest	1803 West Highway 160 Monte Vista, CO 81144 (719) 852-5941 (719) 852-6271 TTY http://www.fs.fed.us/r2/riogrande
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File Code: 2210/1950
 Date: November 3, 2014



San Luis Valley NWR Complex
 Laurie Shannon, Planning Team Leader
 Comprehensive Conservation Plan
 P. O. Box 25486
 Denver, CO 80225-0486

Dear Laurie Shannon:

I appreciate the cooperating agency status that was granted to the U.S. Forest Service during the planning process of the Draft Comprehensive Conservation Plan San Luis Valley National Wildlife Refuge Complex (CCP). Besides our previous involvement and comments, another comment has come to my attention that I wish to include at this time. In review of the Draft CCP it appears that in all alternatives (Alternatives A, B and C), "traditional prescriptive live-stock grazing" is proposed as one of a few management tools for maintaining habitats within the refuge complex. The U.S. Forest Service has a long history of using traditional prescriptive livestock grazing as a management tool as well. History has shown that it is a viable and effective management tool to achieve different objectives, as long as it is managed well. The U.S. Forest Service also uses prescriptive livestock grazing to satisfy the economic dependency of rural communities on National Forest System lands and resources.

The particular comment I wish to make concerning prescriptive livestock grazing is not a matter of advocating for or against using prescriptive livestock grazing as tool. The comment specifically is concerning the possibility of the San Luis Valley Refuges using currently displaced Forest Service grazing permits and permitted livestock to achieve refuge goals as described in the CCP.

As you may or may not know, the U.S. Forest Service and the Rio Grande National Forest (RGNF), in particular, has been and continues to have a major conflict between domestic sheep and Rocky Mountain Bighorn Sheep (bighorn sheep). The issue is the potential of disease transmission from domestic sheep to bighorn sheep. There is much scientific literature concerning this issue along with debate and differing opinions. By using the "Best Available Science", the only responsible course of action that the RGNF has, is to keep the species separated. In some cases, maintaining separation while still allowing domestic sheep grazing can occur. Different risk assessments and risk of contact models have been used by RGNF to help determine what effective separation is or needs to be. As it turns out, effective separation in some cases means the removal of domestic sheep from National Forest Service grazing allotments. At this date there are several grazing permits and permitted domestic sheep that have been or will be displaced from their grazing allotments. This amounts to 4000+ domestic sheep at this time. The RGNF has been feverishly exploring options, communicating with

3-1

3-1. We appreciate your comments on our draft CCP and EIS and applaud your recognition of the local economic importance of public lands. We certainly understand the risk of potential disease transmission between domestic sheep and bighorn sheep where areas of use overlap.



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- 3-2** adjacent National Forests and the Bureau of Land Management to find alternate grazing locations for these permittees. Domestic sheep grazing has been occurring on the RGNF even before it was a National Forest in the late 1880's. It's a long history of grazing, culture and economic dependency for the San Luis Valley that is in the process of coming to an abrupt change. The RGNF has a strong commitment to providing for the economic dependency of these rural communities on National Forest System lands and resources.
- As representative of a cooperating agency, I am bringing this issue to your attention in the event the San Luis Valley National Wildlife Refuge Complex will be soliciting for some level of additional domestic sheep grazing permittees and permitted domestic sheep to be used as management tools in achieving refuge goals. In the event that displaced sheep could be grazed on the refuges, it would be a fortunate situation for all involved.
- Please consider including into your new CCP, some level of a "grant" process with cooperating agencies as a method of filling any additional prescriptive livestock grazing needs. The "grant" process is a pre-determined method the Forest Service uses to grant permits for unobligated grazing capacity. It is a process that prevents the Forest Service from issuing new Term Grazing Permits, before the needs of existing permittees and resource needs are considered, i.e., the situation described above with bighorn sheep and domestic sheep conflicts and loss of grazing areas. A copy of the Forest Service, Rocky Mountain (Region 2), Forest Service handbook "grant" process is attached.
- Thank you for the opportunity to comment on the draft CCP. If you have questions or need more specific information please call or write and I can arrange for my staff to get you further information.
- Sincerely,
- 
ADAM MENDONCA
Acting Forest Supervisor
- Enclosure
- 3-2.** We have a single mandate that specifies that we provide for wildlife and wildlife habitat above all else. As such, all uses of national wildlife refuges including economic uses must be wildlife dependent or contribute to the establishment and maintenance of suitable wildlife habitat. As mentioned in the draft CCP and EIS, prescriptive livestock grazing on the refuges has a long history and continues to be one of the most effective, efficient, and economical tools available for maintaining many of the habitats that occur on our refuges. Because our managers use prescriptive livestock grazing exclusively for habitat maintenance, all permits issued to livestock operators are issued on a one-time or annual basis. Livestock are brought onto a refuge to create a specific habitat condition. Once this is achieved, livestock are removed from the area. Prescriptions for grazing (including timing, seasonality, and animal numbers) vary widely based on habitat types and desired conditions.
- We typically approve permit applications for permittees from several interested local operators, matching their capabilities and flexibilities to the needs of a specific habitat prescription. Permits are extremely restrictive and contain stipulations on how the grazing is to occur. Previous permittees who have successfully executed the prescriptions of their permits with no violations are typically given the first opportunity to graze on areas of the refuge that they have grazed on previously. If they cannot meet our requirements, then new or different operators are considered.
- We share your desire to contribute to the local economy whenever possible, and we feel that our process does in fact contribute. Many of the sheep operators whose sheep graze on Rio Grande National Forest lands also operate on the refuge complex. Since we need a variety of operator flexibilities and capabilities, we continue to welcome applications from cattle and sheep operators. We

(Continued from previous page)

encourage you to have your displaced operators contact us and submit applications.

3-3. Thank you for your comments.

R2 INTERIM DIRECTIVE EFFECTIVE DATE: 19 July 2012 DURATION: This interim directive expires on 16 July 2014	id: 2209.13-2012-1 Page 1 of 73
FSH 2209.13 – GRAZING PERMIT ADMINISTRATION HANDBOOK CHAPTER 10 – PERMITS WITH TERM STATUS	

13.2 - Grant

The authorized officer may modify existing term permits or issue new permits to authorize permitted use of capacity that is not obligated.

13.22 - Grant Priority

Grants may be made to existing term grazing permit holders or to new applicants. Normally preference will be given to existing term permit holders, especially where doing so may help to resolve other resource concerns. When a decision to grant unobligated grazing capacity to an existing permittee is made, the authorized officer shall consider the permittee's record of compliance over the previous 10 years and only make grants to those who have complied with the terms and conditions of their permit, including timely resolution of management concerns, and consistently demonstrated good livestock management and accountability practices. Existing permittees with unsatisfactory permit compliance records as demonstrated by one or more suspension or cancellation action over the previous 10 years shall not be considered for grants of unobligated capacity.

Where appropriate, grants shall be made by the authorized officer based on the following factors in descending order of priority:

1. To existing permittees on the allotment for their proportionate share of any increased grazing capacity resulting from range improvement, development programs, or applied management to which they have contributed.
2. To existing permittees on the allotment for reductions resulting from resource concerns they sustained during the previous 10 years that resulted in the improvement of rangeland resource conditions and an increase in available capacity.
3. To permittees on the same or other Forest Service-administered allotments where the opportunity exists to help resolve resource concerns by relocation of permitted livestock or alteration of permitted seasons.
4. To new applicants who are eligible and qualified. Where a grant is proposed to be made available to new applicants, a prospectus shall be posted in a public venue and made available to parties who have expressed an interest. The prospectus should indicate what is being made available, the terms and conditions under which it is being offered, and provide applicants with an opportunity to file a written application indicating their qualification to hold a permit,

their ability to meet the terms and conditions detailed in the prospectus, and describing how the available capacity would fit into their ranch operations.

In addition, the authorized officer may give consideration to eligible applicants owning and operating a ranch as the sole source of their livelihood over applicants engaged in some other business and operating the ranch as a sideline.

When the grant is to be offered to new applicants, the authorized officer shall establish a set of qualification requirements and should use an independent team to rank potential applicants against the requirements. The authorized officer should then use this written evaluation as supporting information in making the grant decision.

A grant to an existing permittee will be made through modification of their existing grazing permit. A grant to a new permit applicant will be made through the application and issuance procedures set forth in section 14 below.

The authorized officer shall file a brief statement with the new or modified term grazing permit explaining the basis for the increased authorization.



United States Department of the Interior

NATIONAL PARK SERVICE
Great Sand Dunes National Park and Preserve
11500 Highway 150
Mosca, Colorado 81146-9798
Phone 719-378-6300 Fax 719-378-6310



In Reply Refer to:

November 3, 2014

Ron Garcia, Acting Project Leader
SLV NWR Complex Administrative Office
8249 Emperius Road
Alamosa, CO 81101

Dear Mr. Garcia,

4-1

Thank you for the opportunity to provide comments on the Draft Comprehensive Conservation Plan (draft CCP) and Environmental Impact Statement for the San Luis Valley (SLV) National Wildlife Refuge Complex. We commend your work to date on such an important planning document and look forward to continuing our cooperative relationship in the stewardship and management of federal public lands in the SLV.

As you are aware, the National Park Service (NPS) is also in the process of developing an Ungulate Management Plan and Environmental Impact Statement (plan/EIS) for Great Sand Dunes National Park and Preserve (GRSA) that focuses on the future management of elk and bison. A no-action alternative and three preliminary draft action alternative concepts were released by the NPS for public and agency review and comment in early September 2014. They consider a range of future management scenarios for both elk and bison. The NPS has not identified a preferred alternative and no decision has been made. Therefore, our comments focus on the potential for coordinated management to address common issues in our respective plans.

4-2

The NPS is supportive of the elk management efforts outlined in your proposed action for the Baca National Wildlife Refuge (refuge). All of the action alternatives being considered by the NPS include some form of elk management. A coordinated approach to elk management would contribute to our shared management success.

Your proposed action also calls for phasing out the existing arrangement with The Nature Conservancy and a commitment to researching the feasibility and suitability of using bison to maintain and enhance certain refuge habitats. As you are aware, two of the action alternatives currently being considered by the NPS include bison on the landscape. One of these alternatives was developed as a bison conservation alternative in consideration of the Department of Interior's (DOI) Bison Conservation Initiative (BCI) as well as the NPS Call to Action number 26 - back home on the range.

Given your bison research proposal and our proposed future bison management, we will continue to coordinate with you on bison issues throughout our planning process. In particular, we look

4-1. Thank you for your comments and your support of our elk management efforts. We agree that a coordinated approach to elk management ensures our shared management success and enables us to achieve the legislated purposes of Baca Refuge, including the role of the refuge in broader landscape conservation and our emphasis on migratory bird conservation and other species of concern.

4-2. We believe we have a tremendous opportunity to work together on public outreach and educate the public about our respective elk and bison management programs and recreational opportunities in the area.

forward to additional discussions about issues associated with bison ecology, genetics and health as well as other bison related issues, such as fencing removal, construction and maintenance, visitor safety and access, and protection of wilderness values. The NPS is also aware that additional elk and/or bison "step-down planning" may be needed for the refuge in the future and we look forward to cooperating with you on such plans to ensure effective and collaborative management.

Although our plan/EIS does not alter existing fire management plans, we appreciate that your proposed action calls for increased coordination with partners regarding fire management planning and implementation and we look forward to working with you on this matter.

Finally, the NPS commends you on proposing additional public recreational opportunities for residents of and visitors to the SLV. We would welcome the opportunity to enhance visitors' experience and ensure their safety by jointly preparing and distributing visitor information and programming. Such information could be distributed at the park and refuge visitor centers. These products could highlight our respective missions and clarify the public educational and recreational opportunities on the refuge and those on the park and preserve. In particular, since public hunting is allowed in Great Sand Dunes National Preserve and would be allowed under your proposed action in certain areas of the refuge, but is not allowed in Great Sand Dunes National Park, a concerted effort would be needed to jointly educate public hunters.

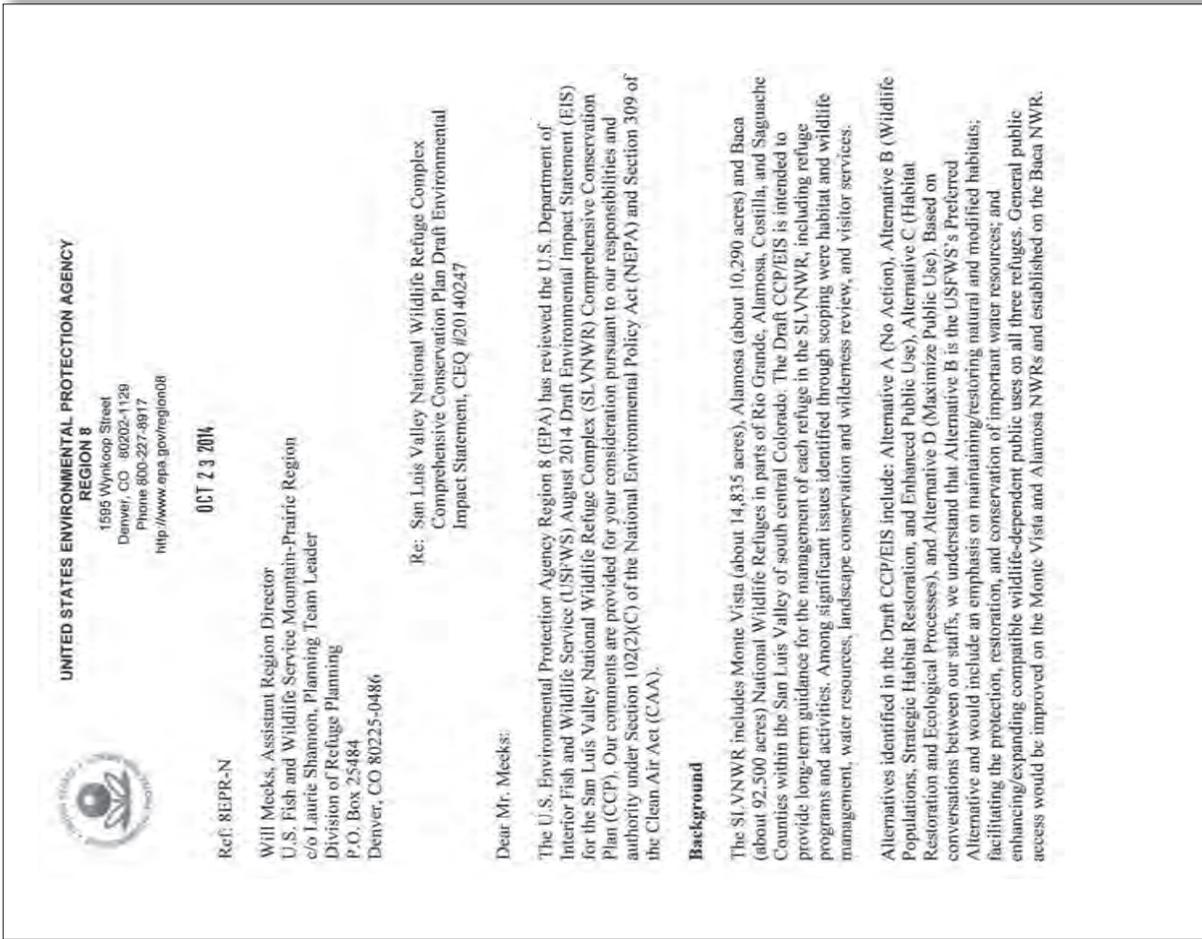
Thank you again for the opportunity to comment on your draft CCP. We value our long-standing relationship and commitment to the stewardship of public lands in the SLV and look forward to continuing to work together in the future.

Sincerely,



Lisa Carrico, Superintendent
Great Sand Dunes National Park and Preserve

4-3. Thank you for your comments. We recognize that there are a lot of unknowns that affect the decisions you'll be making in your ungulate management plan and EIS, as well as in our research on how bison would use various habitats on the refuge, water availability, and climate change. Our bison research would be designed to proportionately represent the habitats found across the landscape. We think it is important to maintain flexibility as more information becomes available and decisions are made. We also look forward to the continuation of our ongoing relationship and cooperation, and we value the efforts of you and your staff to achieve a coordinated approach in the future.



5-1

5-1. We appreciate your comments on our DEIS. Your suggestions during the scoping phase were helpful to us in identifying specific areas to address. We have incorporated several of your suggestions into the final CCP and EIS where they are applicable to the decisions we are making for the three national wildlife refuges.

The USFWS has done a commendable job of addressing scoping comments received for this Draft CCP/EIS. Since most of the EPA's initial scoping comments have been addressed, our remaining water resource-related recommendations are intended to further inform the decision-maker and the public of potential impacts to public health and the environment. Based on our review, we are rating this Draft EIS as "Lack of Objections," as discussed in more detail at the end of this letter.

Water Resources

We appreciate the Draft EIS discussion related to water resource characterization of the San Luis Valley and support the USFWS's efforts to restore and protect the important water resources of the SLV/NWR. We recommend that the Final EIS include an expanded water resources discussion, as discussed below.

Hydrology

The Hydrology Section, beginning on p. 165, discusses the drainage area of the Rio Grande River. We suggest expanding this discussion to include the length of the river and its tributaries, in river miles, as a useful aid in understanding the hydrology of the region. This information may also facilitate better understanding of the Water Quality Monitoring Section's discussion of impaired water bodies (discussed further below) since the impaired segments include information about length.

Water Quality Monitoring

The Water Quality Monitoring Section, beginning on p. 176, references outdated assessment data for the Rio Grande headwaters watershed. The EPA recommends that the Final EIS be updated to clarify that the Colorado Department of Public Health and Environment (CDPHE) determines water quality standards and impairment status of waters under the Clean Water Act (CWA). The EPA recommends that the Final EIS reference Colorado's 2012 CWA Section 303 (d) Impaired Waters List, as approved by the EPA, and the 2012 Water Quality Monitoring and Assessment Report (305(b) Report), and include this information in the discussion of water quality trends observed in, and downstream of, the planning area.

A map showing all impaired water bodies within the planning area, as well as impaired waters downstream of the planning area, would be a useful tool to convey the latest available information regarding existing water quality. For ease of identification, we suggest including a table of CWA Section 303(d)-listed waters and water body segment ID numbers.

In addition, if CDPHE has not assessed the water quality in all water bodies within the planning area, then we recommend that the Final EIS list such water bodies and indicate that the water quality condition has not yet been assessed by CDPHE. For your information, the Water Quality Report and 303(d) list may be accessed at <https://www.colorado.gov/pacific/cdphe/wqec-reports-and-plans>.

We also recommend that the Final EIS include up-to-date information about Total Maximum Daily Loads (TMDLs) for impaired waters in the area of potential impacts. Information regarding TMDLs may be accessed at <https://www.colorado.gov/pacific/cdphe/tmdl-rio-grande-river-basin>.

5-2. We expanded the text on hydrology in the final CCP and EIS to include information about the length of the Rio Grande and its tributaries.

5-3. We updated the outdated references in the final CCP and EIS.

5-4. For the final CCP and EIS, we have included a map of the designated impaired waters within the scope of the analysis; however, since it does not appear that any impaired waters or Total Maximum Daily Load (TMDL) designated reaches affect our lands either upstream or downstream, and because we do not have control or influence over any impaired waters shown on the map, we do not see the need to provide detailed tables of areas that have not been assessed. Instead, we acknowledge in the text that other reaches, including the reaches through Monte Vista and Alamosa Refuges, have not been assessed. Our water management objectives and strategies do address the need to establish a quantitative water quality monitoring program on all the refuges.

5-5. See response 5-4.

5-6. The map of impaired waters includes updated information on TMDLs.

Impacts of Roads on Water Resources

We appreciate the Draft EIS discussion related to potential soil impacts from proposed roads, parking areas and trails on the three refuges. We recommend expanding this discussion to describe related potential impacts on water resources and steps that will be taken to reduce these impacts. We recommend that specific attention be paid to road surface, road density, number of road stream crossings, road drainage and surface erosion, culvert sizing and potential for washout, culvert allowance for fish migration, effects on stream structure and seasonal/spawning habits, and impacts to riparian habitats.

The EPA's general recommendations regarding roads include the following measures:

- Locate roads away from streams and riparian areas where possible;
- Locate roads away from steep slopes, landslide prone areas, and erosive soils;
- Minimize the number of road stream crossings;
- When road stream crossings are unavoidable, construct during periods of low flow to avoid fish spawning and incubation periods, and/or dewater relevant stream segments prior to construction;
- Provide adequate drainage and control of erosion to avoid routing sediment to streams;
- Use bottomless or textured bottom culverts if possible; and
- Design roads to allow for natural drainage patterns.

The EPA's Rating

Based on our review, the EPA is rating the Draft EIS Preferred Alternative as "Lack of Objections" (LO). The "LO" rating means that the EPA has not identified any potential environmental impacts requiring substantive change to the Preferred Alternative but may have disclosed opportunities for application of mitigation measures that can be accomplished with no more than minor changes to the proposed action. Please refer to <http://www.epa.gov/compliance/nea/comments/ratings.html> for a description of the EPA's rating system.

We appreciate the opportunity to comment on this document and hope our suggestions will assist you with preparation of the Final EIS. Please contact us if additional explanation of these comments would be helpful. You can reach me at 303-312-6704, or your staff may contact Amy Platt at 303-312-6449.

Sincerely,



Philip S. Strobel
Acting Director, NEPA Compliance and Review Program
Office of Ecosystems Protection and Remediation

5-7. We have incorporated your general recommendations on roads under the strategies for refuge operations (chapter 3).

5-8. Thank you for your rating of "Lack of Objections" for the preferred alternative. We appreciate your thoughtful suggestions.



COLORADO
Department of Natural Resources

Executive Director's Office
1313 Sherman Street, Room 718
Denver, CO 80203

October 24, 2014

San Luis Valley NWR Complex
Comprehensive Conservation Plan
Ms. Laurie Shannon, Planning Team Leader
United States Fish and Wildlife Service
P.O. Box 25486
Denver, CO 80225-0486



Dear Ms. Shannon:

Thank you for the opportunity to comment on the draft Comprehensive Conservation Plan and Environmental Impact Statement for the San Luis Valley National Wildlife Refuge complex. Under cover of this letter are comments prepared by two DNR Divisions; Colorado Parks and Wildlife (CPW) and the Division of Water Resources (DWR). CPW and DWR are active participants in this planning process as cooperating agencies, and we look forward to continued coordination with you.

Do not hesitate to contact CPW and DWR representatives with any questions.

Sincerely,



Mike King
Executive Director

1313 Sherman Street, Room 718, Denver, CO 80203 P 303.86.3311 F 303.866.2115 www.colorado.gov/dnr

John W. Hickenlooper, Governor | Mike King, Executive Director

6-1

6-1. As cooperating agencies in the development of our CCP, Colorado Parks and Wildlife and the Division of Water Resources have shared with us many of our insights and concerns on habitat and wildlife management as well as how best to manage our water resources in the future. We have greatly valued your contributions to our planning effort. We also look forward to continuing the conversation with your agencies as we begin to implement the actions described in the CCP.



COLORADO
Parks and Wildlife
Department of Natural Resources

Monte Vista Office
0722 S CO Rd 1 East
Monte Vista, CO 81144
P 719.587.6900 | F 719.587.6934

October 21, 2014

San Luis Valley NWR Complex Comprehensive Conservation Plan
Ms. Laurie Shannon, Planning Team Leader
United States Fish and Wildlife Service
P.O. Box 25486
Denver, CO 80225-0486



Bob D. Broachfeld, Director, Colorado Parks and Wildlife • Paris and Wildlife Commission: Robert W. Bray • Chris Castellan, Secretary • Jeanne Horne
Bill Kears, Chair • Gaspar Perricone • Dale Pizat • James Priby • James Vigar • Dean Wingfield • Michelle Zimmermann • Alex Zipp

Dear Ms. Shannon:

Colorado Parks and Wildlife (CPW) appreciates the continuous, long-term cooperation between our agencies in the development of this draft and on on-going wildlife management issues. We appreciate the opportunity to comment on the United States Fish and Wildlife Service's (USFWS) San Luis Valley National Wildlife Refuge Complex Draft Comprehensive Conservation Plan. My staff and I have reviewed the plan and submit several comments related to the purpose of refuges and the wildlife population dynamics within and around refuge lands.

As you describe, this complex offers numerous and varied habitat types, which include: wet meadows, playa wetlands, riparian areas, desert shrublands, grasslands, and croplands. This variety and arrangement ensures that numerous species of wildlife can meet their life cycle demands either entirely within the complex or utilizing individual habitat components. It is significant to note that all three refuges are immediately adjacent to agricultural operations. We concur with the plan's provisions for the vast majority of species and are providing comments on issues that are important to CPW and need further elaboration and/or refining. These include Southwest Willow Flycatcher (SWWFL), elk management and hunting as a tool for acute and chronic elk distribution/management issues, hunt plan timing, coordinated hunts and chronic wasting disease.

Southwest Willow Flycatcher

With continuing drought, potential effects of climate change, new ground water regulations, water availability for management at Alamosa National Wildlife Refuge is likely to decrease. Yet, the objectives stated in Alternatives B through D include expanding SWWFL habitat. These circumstances do not lend themselves to developing SWWFL habitat because those habitats are highly dependent on consistent water availability.

Additionally, in some alternatives the USFWS plans to create additional trails and roads. SWWFL response to trail/road disturbance is not well known. We suggest that USFWS do a pre-project study (rather than ad hoc) to assess SWWFL disturbance rates along existing trails

6a-1. We appreciate your thoughtful comments and suggestions on the draft CCP and EIS

6a-2. Southwestern willow flycatcher. Your assessment that the current water availability has negatively affected the refuge complex and all the wetlands in the San Luis Valley is correct. Given that we have no control over the hydrology of the river, we understand the daunting challenge of improving riparian habitat along the Rio Grande. However, Alamosa Refuge has the exclusive use of a senior water right that we would continue to use (following all legal place of use requirements) to establish and improve riparian vegetation and function near the river in select, old river channels. We would install groundwater monitoring wells to determine the water levels that are needed in potential restoration sites. Also, we would study restoration sites to determine potential impacts to riparian vegetation from beaver, porcupine, and ungulates.

We monitor southwestern willow flycatcher nesting territories according to strict Service standards. All of the proposed trails on Alamosa Refuge already exist as roads that are travelled by permittees, hunters, and staff. We would use the survey data to relocate the current Service roads if necessary, especially in areas where we would restore riparian habitat. In order to reduce any potential disturbance to nesting territories, any relocated or existing road would also be part of the pedestrian trail. Additionally, we could implement additional seasonal closures if necessary.

6a-1

6a-2

6a-3. Elk Management. We commend and support CPW's efforts to work with us to conduct agency culling of elk to minimize damage to agricultural lands and riparian habitat. On Alamosa and Monte Vista Refuges, public hunting would be ancillary to agency culling. However, by working in partnership with others, we could still provide for a quality hunt. These hunts would complement agency culling efforts by providing consistent low-intensity hunting pressure to keep animals moving.

Elk use the refuges both to escape hunting pressure and as staging areas to access neighboring private lands. We have found that some elk are permanent residents on the refuges and rarely venture onto neighboring lands. On Baca Refuge, the wet meadow habitats combined with the overall lack of disturbance have resulted in these areas becoming important breeding and birthing areas for elk. Additionally, migratory elk move onto the refuge in winter months when foraging becomes difficult in montane areas. As a result, CPW has designated portions of the refuge as critical winter range. In recent years, some of our elk surveys have documented only limited and smaller movement onto neighboring lands as a result of hunting pressure, but overall elk numbers are disproportionately high on the Baca Refuge and are likely to be in need of reduction and redistribution, whether onto other portions of the refuge or off the refuge.

There are mutual benefits of using public hunting as a management tool as well as an opportunity to provide for quality wildlife-dependent recreation (which has deep cultural roots in the San Luis Valley). On Baca Refuge, in addition to having the ability to effectively manage elk to meet habitat objectives, we can assist CPW with meeting elk population objectives for the greater GMU 82. This would not necessarily be accomplished by taking more animals off the refuge, but by keeping elk more evenly distributed between refuge lands and other surrounding lands, they would be more accessible to hunters both on the refuge and on surrounding lands. Low-intensity, lon-

and roads compared to undisturbed areas. Once new trails/roads are developed, restoration can be difficult. Enforcement of trail and road usage will be important.

Elk Management

CPW appreciates the USFWS' efforts to work with us through this process to develop alternatives that will provide tools to begin managing both acute and chronic issues related to elk numbers, distribution and our inability thus far to manage them effectively.

The plan introduction states that your priority is wildlife conservation, including habitat conservation, while acknowledging that public uses, specifically wildlife-dependent recreation, are allowable as long as they are compatible with the established purposes of the refuges. The USFWS has acknowledged that elk have, in certain circumstances, negatively affected habitat resources for which your agency has management responsibility.

From CPW's perspective, elk throughout the complex utilize refuge lands to escape hunting pressure and as staging areas from which they can access private agricultural lands. Their ability to escape hunting pressure makes it difficult for CPW to reach harvest objectives because they become unavailable for harvest. We depend upon this harvest to keep the population in balance with its habitat and with the social carrying capacity of private landowners. When refuge land is used as a staging area, elk damage crops and fences on neighboring lands causing economic hardship and reducing tolerance for big game in the area. Elk should be viewed as majestic animals with high economic value, not as agricultural pests. Further, CPW is liable for losses to agricultural products sustained by big game.

Public hunting is an important wildlife management tool. It is also an enjoyable recreational pursuit for millions of people in the U.S. and has deep cultural traditions in the San Luis Valley. Recreational hunting leverages valuable agency resources by using licensed, public hunters to help achieve elk management objectives for the refuge complex and for CPW's management objectives on a broader scale.

CPW has used culling by our agents and will likely continue to in situations that call for using that tool. However, public hunters are the primary tools for wildlife management. The primary goal of focused hunts on Alamosa and Monte Vista Refuges is managing elk on the most efficient manner, while the recreational opportunity for public hunters is ancillary. At the Baca, where the opportunity for recreational hunts is possible, nearly all acute and many chronic issues created by elk numbers and distribution will be resolved by public hunters and agency culling in a focused management action.

For the purposes of this plan, we suggest that you distinguish between conflict management actions (culling alone or coupled with focused public hunts) and recreational hunts. Nearly all conflicts, e.g., significant game damage, call for focused hunting pressure that is maintained for several days or longer. Short bursts of activity without follow-up are ineffective as the elk will return within 24 hours. Consistency is essential to ensure success. Conflicts such as problematic elk distribution and significant short term game damage require nimble and adaptive management actions. Population management and chronic long term game damage issues can be addressed with normal recreational hunting. The key principle for these

ger-duration hunting, as you mentioned, would be the key to effective and lasting redistribution and would also allow for opportunities for a high-quality hunt on the refuge. We recognize the damage that has resulted from having high elk numbers on the refuge complex on a year-round basis, and we are committed to developing and implementing a hunt plan with CPW as soon as current resources allow.

In the final CCP and EIS, we have updated the objectives and strategies to better distinguish between resource management actions and recreational hunting, especially in situations where actions by hunters are geared more toward a specific resource management action.

In addition to providing hunting opportunities, we are proposing to balance the use of the refuge by consumptive and non-consumptive users, and we are taking steps to reduce the potential for conflicts between the two user groups. Public hunting will not always be the perfect tool for most effectively managing elk distribution. All areas within the refuge complex need to be accessible by agency (FWS and CPW) personnel, upon prescription, to effect elk management using culling, hazing, and hunting. Many areas along Baca Refuge's western boundary (former Colorado State Land Board Lands) are accessible to Habitat Partnership Program (HPP) coordinated hunts.

Under no circumstances do we propose a situation where no elk occur on any of the refuges. As a wildlife species, elk definitely have a place on the refuges, and our public stakeholders also see the benefit that elk viewing opportunities could bring to their communities.

6a-4. Hunt Plan Development. We understand and share your concern about our timeline for developing and implementing a hunt plan for the refuge complex. However, objectives B1, C1, and D1 have identical timeframes for developing the hunt plan (by year 3), followed by 50 percent implementation by year 4, and 100 percent implementation by year 7. In the final CCP and EIS, we

situations is having consistent lower intensity hunting pressure to keep animals moving through their habitats in a normal and varied way.

Currently, Alternative D seems to be the best solution for elk management issues because public hunting is maximized and the hunt plan can be more readily developed and implemented. Alternative A is not acceptable to CPW because it maintains the status quo and provides little opportunity to manage elk effectively. Alternatives B and C provide some elk management tools, but the time it will take to develop a hunt plan and implement it make these alternatives less acceptable.

Accounting for the distinction between conflict management actions and recreational hunting in the Alternatives would be important. Currently there is not enough emphasis for dealing with elk conflicts in these alternatives. We suggest adding conflict management actions (culling and/or focused public hunts) to Alternatives B through D. These tools must be available for use anywhere within the refuge boundaries in order to be effective. Without these provisions, more land must be made available for recreational opportunities. For instance at Baca, the entire area north of Cottonwood Camp and west of the Lexam Road is closed to all big game hunting. With the Alternatives as they are currently written, we would ask that archery hunting be allowed in this closed area because without that management tool the elk will begin using this area as a refuge and are perfectly situated to access private lands and cause damage. If Alternative B through D included tools such as agency culling and focused public hunts to address elk distribution problems as they arise, we would be comfortable with leaving this closed area closed. This is just an example. Several other issues exist at all three refuges.

Hunt Plan Development and Implementation

CPW's primary concern is the amount of time USFWS believes it would take to implement. The USFWS and CPW are often criticized publicly for not managing the elk herd and allowing damage to continue when there are public hunters willing to spend their own time, money and effort to help solve these issues. We understand that developing plans takes time and we are available and willing to help shoulder that burden. We suggest that you provide a reasonable explanation regarding the extended timeline; as to why it will take years to develop and implement these hunt plans. Not providing an explanation will breed distrust and generate rumors that this is not a sincere effort to manage elk within your boundaries.

Coordinated Hunts

We understand the need to have hunters being attended in areas where there is a risk due to the proximity of homes and public roads. We have collectively used coordinated hunts in the past to good effect. The local Habitat Partnership Program (HPP) Committees had been financing hunt coordinators because of their role in preventing game damage in their conflict areas. However, HPP support for carrying that fiscal burden is waning. In the future, the USFWS may need to play a primary role in helping finance and/or finding new ways to provide this type of valuable service.

6a-4

6a-5

6a-6

Chronic Wasting Disease

Hunter interest in testing for this disease has dropped significantly in the past 5 years. CPW does not do any mandatory testing in the San Luis Valley. CPW provides testing to the public at two labs in Colorado for a fee. If USFWS wants to continue to test heads we need to discuss how to get meaningful sample sizes and recover costs associated with testing.

6a-7

Wilderness

CPW normally supports wilderness designations for remote wild places. Typically wilderness is found at high elevations where elk do not congregate, except during the summer months and typically do not create conflicts on nearby agricultural land. The elk are most often forced out of these areas as snow begins to accumulate. Wilderness on what would be winter range for elk creates an entirely different situation. In the context of the Baca Refuge, elk could congregate in the area proposed for wilderness and find refuge from hunters. A minimum tools analysis would need to be done even for agency personnel to conduct management actions, which could severely hinder CPW's ability to effect management, especially when time is of the essence in an acute problem situation.

For the most elk management flexibility, CPW recommends no wilderness designation or completing a minimum tools analysis up-front to ensure that we have the ability to manage big game efficiently and without additional fiscal burdens.

6a-8

Fishing Access

Alternative D increases and enhances opportunities for photography, observation and interpretation in the same area where fishing access is being prohibited. Disturbance to wildlife is cited as being the reason to disallow fishing access. Safety concerns in the immediate area of the Chicago Ditch diversion are also cited as a reason for the closure. However, disturbance to wildlife in the same area will increase for the other uses mentioned earlier.

Significant fishing opportunity could be provided in this area. CPW recommends closing the area immediate to the Chicago Ditch Diversion to all uses, while allowing fishing and other forms of recreation along the stretch of the Rio Grande near the Visitor's Center.

6a-9

Conclusion

We hope we have sufficiently explained our concerns with respect to Southwest Willow Flycatcher (SWWFL), elk management/hunting as a tool for acute and chronic elk distribution/management issues, hunt plan timing, coordinated hunts, chronic wasting disease and fishing access. In all, this is a well thought out plan presented in a manner that is clear and useful. We appreciate your efforts and this opportunity to provide comments. Attached to this letter is the form that you requested. In it are additional details for specific pages and comments that provide the basis for this letter.

have clarified the other objectives of the alternatives and made them simpler and hopefully less confusing. Although initial implementation could occur in fewer than 3 years (which we have noted), and full implementation could occur in fewer than 7 years, there are several steps that need to be in place before we can fully open Baca Refuge to hunting and implement a big game hunt on all three refuges.

We are now finalizing this CCP and EIS, which will be followed by a Record of Decision (Fall 2015). Then we can develop and finalize the step-down hunting plan, which would include some opportunities for youth hunts or mobility hunts. We will be relying on CPW resources and perhaps even those of the Mount Blanca and San Luis Valley HPP committees to assist us in the plan development. We need to forward the hunt plan package to our Washington, D.C. office where, subsequently, if approved, the hunting regulations would be published in the Federal Register. While we could begin initial implementation at that time, we would also need to have the basic infrastructure and staff resources in place to manage a hunting program and other components of our visitor services program. In addition, we would be trying to implement other important habitat management objectives on the refuge complex. As you are aware, our budget is constrained so it may take us a while to fully implement the hunting program. We will take you up on your offer to assist us where possible.

There are some nuanced differences between the hunting programs under alternatives B, C, and D, and we have attempted to clarify these in the final CCP and EIS. These differences deal with the type of hunts available, the quality of the experience (versus maximizing hunter numbers), youth and mobility hunts, and conflict related to recreational hunts and non-consumptive uses, so not everything can be fully implemented immediately. It is prudent for us to give ourselves a longer timeframe if needed.

6a-5. Coordinated Hunts. We agree that coordinated hunts in areas with high risk or sensitive situations are a valuable management tool. We also feel that the role that the HPP has played and continues to play in carrying out these hunts goes a long way in supporting both CPW and Service objectives for elk management and that it fills a vital gap that neither agency would otherwise have the resources to accommodate. We are disappointed to hear that HPP Program support for these efforts is waning, as we believe it is the most important contribution the program can make to assist CPW in meeting its elk management objectives in areas of the San Luis Valley where conflicts are more prone to occur. We hope that CPW realizes this as well and requests HPP's continued support of the Hunt Coordinator Programs.

6a-6. Chronic Wasting Disease. We realize that chronic wasting disease (CWD) is not a concern for CPW in the San Luis Valley. However, refuges nationwide are being encouraged to implement an early detection mechanism as part of disease contingency planning. As part of this effort, we would like to develop a strategy for periodic sampling which would give us early warning in case CWD were to appear in the SLV. We would work with our Wildlife Health Office to assist with design and necessary funding to accomplish this strategy, and we hope that CPW remains a committed partner in this effort.

6a-7. Wilderness. When considering areas of the Baca Refuge for wilderness designation, we did take into account how this designation might affect elk management. Regardless of the wilderness designation, hunter access into the areas being considered would occur only by foot or horseback. A minimum tools analysis would be completed up front to determine if game carts could be accommodated for game retrieval, but foot or horseback would be the removal means of choice. In addition, areas being considered for wilderness are divided into two distinct parcels separated by a road that currently

We look forward to continued collaboration and to working with you in managing the wildlife resources in the San Luis Valley. If you have any questions or concerns regarding these comments, please contact me at (719) 588-8200 or via email at rick.basagoitia@state.co.us.

Sincerely,



Rick Basagoitia
Area Wildlife Manager - San Luis Valley
xc: SWR file, Area 17 file, Holst, Magee, VerSteeg, Bishop

ID	Response
16242014	<p>Alternative C: (page 101) More elk hunting opportunities ensure over-knowledge does not occur due to elk redistribution.</p> <p>Alternative D: (page 101) Preferred CPW alternative Best alternative for maximizing hunter opportunities, redistributing elk, and helping CPW meet population objective and sex ratio objectives.</p> <ul style="list-style-type: none"> • "Alternative D" also would help elk game damage issues in adjacent and surrounding agricultural fields. <p>Chapter 3, Page 107: Visitor Services/Hunting Objectives for Hunting: WYNWR should also consider more coyote hunting opportunities in addition to elk hunting. Coyotes appear to be increasing in numbers on the refuge and surrounding private lands.</p> <p>Alternative A: (page 107): Maintain existing hunting program: • No elk hunting on WYNWR would result in an increase of resident and winter elk populations, similar to the 1990s. Not a preferred alternative by CPW.</p> <p>Alternative B: (page 107-108): Hunt program expansion: • 7 years until hunt plan implementation? Why so long? • How would the public be restricted/what type of hunt method (archery or muzzleloader)? • Acceptable alternative, but not preferred by CPW.</p> <p>Alternative C: (page 109-110): Wildlife and habitat objective achievement: • Less hunting opportunities will not necessarily foster better habitat. • In the 15 years it will take the NWR to implement a hunt plan, the resident elk population could double. • Not preferred by CPW.</p> <p>Alternative D: (page 110): Maximize hunting opportunities: Preferred CPW alternative. • 3 years is a more acceptable time frame to implement a hunt program, compared to 7 or 15 years. • More hunting opportunities would maximize elk management and better meet CPWs population and sex ratio objectives.</p> <p>CPW-86 Alamosa Refuge Specific HUNTING</p>

10/24/2014

3

Draft Proposed Action for Wildlife Populations, Strategic Habitat Restoration, and Enhanced Public Uses (Page 44): Wordings seems sufficiently vague enough to allow different hunting strategies for controlling and dispersing elk populations on Alamosa Refuge. Map on Page 46 also designates that hunting can occur outside the designated area. Proposed action as outlined is acceptable.

Strategies outlined on Page 100-101 seem in line with what we have discussed in past communications. Objectives outlined on page 107 are acceptable, but it is questionable why it would take 7 years to fully implement these. This seems to be a common question. Perhaps it would be beneficial for refuge personnel to provide an acceptable explanation for this that would satisfy the public perception that they are postponing opening the refuges to public hunting opportunity.

Appendix D (page 312, column 2, paragraph 4) states: "Hunters would be accompanied by agency personnel and instructed about which animals to take to meet management objectives". Does this obligate CPW to provide resources and/or personnel to manage these dispersal hunts? If so, we should consider where these resources will come from and what type of budgetary and/or workforce restraints they might incur.

I agree with what Luke has outlined regarding Coyote hunting opportunity on the Alamosa/Monte Vista refuge complex (refer to his comments). I would present this as "Predator Hunting", which would include the taking of fox. Any safety concerns associated with this could be dealt with by requiring these hunters to abide by the existing rules which only allow hunters to use shotguns firing non-toxic shot.

FISHING

Objectives for fishing at the Alamosa Refuge outlined on page 110 under Alternative B (proposed action) are unacceptable. CPW encourages refuge personnel to consider Alternative D as it relates to fishing access. Safety concerns on the Chicago Ditch diversion structure are understandable, but could be dealt with by disallowing fishing in that specific area. There doesn't seem to be an acceptable reason why walk-in fishing access would not be allowed south of the Visitor's Center, which is far from the Chicago Ditch diversion.

Concerns that have been articulated in the past have to do with disturbance to other wildlife in that area (pg 215), however, these concerns do not seem to be congruent with the Photography, Observation, and Interpretive objectives outlined on Page 112-114. Under those proposed objectives, the strategy is to drastically increase participation and enhance opportunities for these activities, which would inherently increase disturbance. Later in the document, this increase in disturbance is not only acknowledged, but justified (Chapter 5 - Consequences). Why is an increase in disturbance tolerated for one activity, but used as an excuse to prohibit another? This is an apparent double standard that warrants explanation.

CPW-RR Baca Specific

Page 53 - Baca NWR map

Expand archery hunting opportunities to the west BNRW boundary. If this area is not included for public access, elk will congregate in this safe no hunting area. This area is also close to Colorado highway 17 where large elk groups could easily cross and cause game damage issues west of highway 17.

Comment
number

LETTER 6—Colorado Department of Natural Resources, page 10 of 11

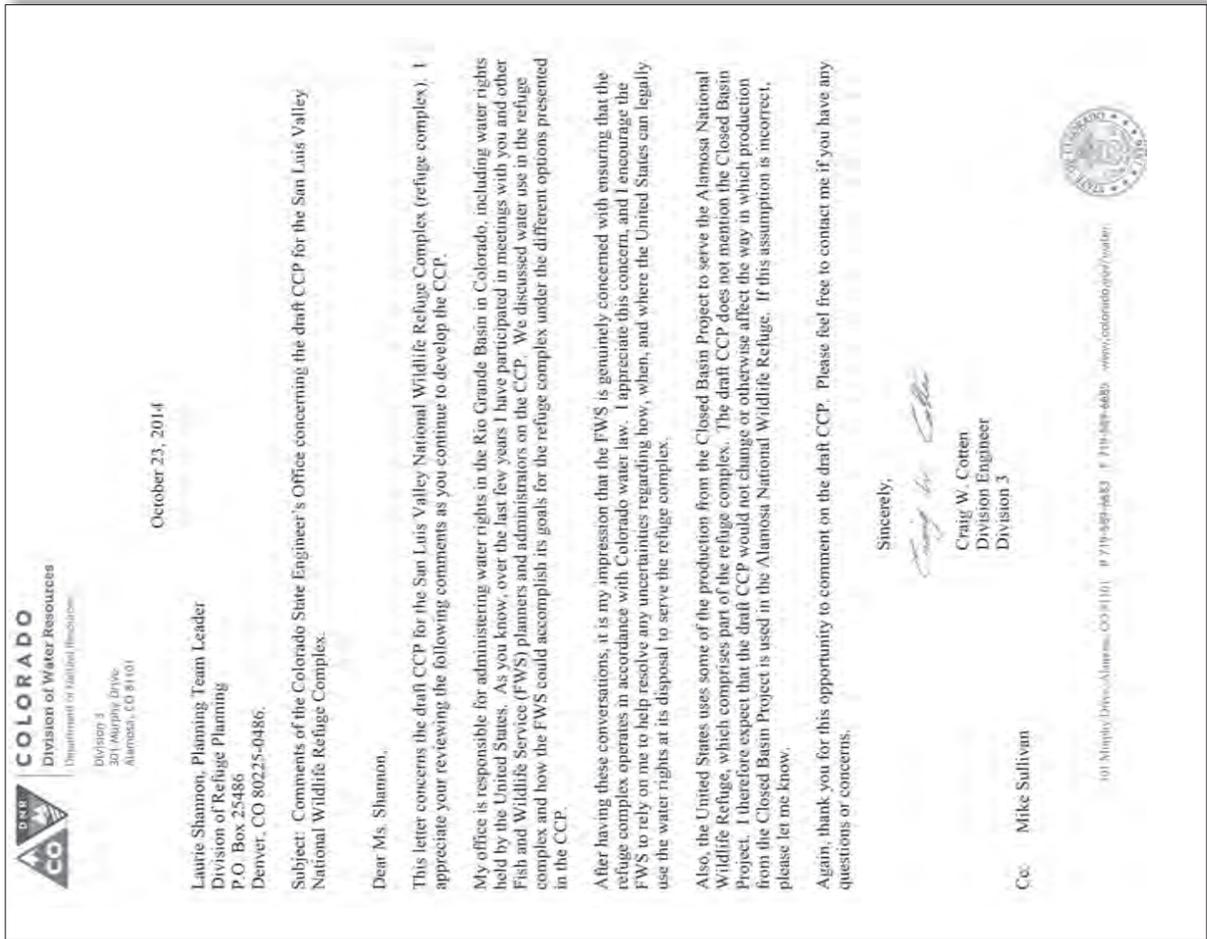
RESPONSE

10/24/2014

4

Page 101 - D1-D4
Colorado Parks and Wildlife support alternatives D1-D4 to maximize hunting opportunities on BNR. With current big game management unit 82 elk population at the top of the objective goal and the continued lack of hunting opportunity in the southern end of unit 82, including restricted access to Great Sand Dunes National Park, Colorado Parks and Wildlife would support the maximum elk hunting opportunity on BNR.

Page 110 - BNR D7
Colorado Parks and Wildlife support D7 to open refuge for hunting activities within 3 years. Given current elk population within unit 82 the quicker and the more hunter access which can be established the greater the chance to properly manage the unit 82 elk herd.



6b-1

6b-1. We appreciate the insights and suggestions you provided to us during the planning process, and we will continue to rely on your input on how we can accomplish the mission of the Refuge System and the purposes of the refuge complex within the constraints of existing water law and State regulations.

6b-2

6b-2. The draft and final CCP and EIS do mention the Closed Basin Project in a number of places, and indicates that we use Closed Basin water on Alamosa Refuge. We plan to continue to use the water in the same way as we have been, but that could change if the response functions make it necessary.

6b-3

6b-3. Thank you for your comments.

Comment number

LETTER 7—History Colorado, page 1 of 1

RESPONSE



SEP 18 2014

September 9, 2014

Laurie Shannon
Planning Team Leader
U.S. Fish and Wildlife Service
Division of Refuge Planning
P.O. Box 25484
Denver, Colorado 80225-0486

Re: Draft Comprehensive Conservation Plan and Environmental Impact Statement (CCP/EIS): San Luis Valley National Wildlife Refuge Complex (CHS #66501)

Dear Ms. Shannon:

Thank you for submitting a copy of the draft CCP/EIS (received by our office on August 27, 2014) for our review and comment. This documentation was provided to our office in accordance with your obligations under the National Historic Preservation Act and the National Environmental Policy Act as you consider long-term management alternatives of the San Luis Valley National Wildlife Refuge Complex.

We understand following our review of the documentation provided that U.S. Fish and Wildlife Service plans to meet its obligations under Section 106 of the National Historic Preservation Act (Section 106) and its implementing regulations 36 CFR Part 800 through standard consultation prior to implementation of project-specific undertakings as defined by 36 CFR 800.16(f). While we have no objections to this approach, we encourage you to coordinate your National Environmental Policy Act (NEPA) studies with the cultural resource studies required under Section 106.

According to 36 CFR 800.8, federal agencies are "encouraged to coordinate compliance with Section 106 and the procedures in this part with any steps taken to meet the requirements of the National Environmental Policy Act." Also, Section 110 of the National Historic Preservation Act states that Federal agencies should "coordinate with the earliest phases of any environmental review carried out under the National Environmental Policy Act." The findings from the Section 106 studies can inform the NEPA studies, such as including mitigation measures identified under Section 106 into the NEPA decision document. Once we receive the Section 106 documentation, we will be able to fully complete our reviews under both Section 106 and NEPA.

The Section 106 consultation process does involve other consulting parties such as local governments and Tribes, which as stipulated in 36 CFR 800.3 are required to be notified of the undertaking. Additional information provided by the local government, Tribes or other consulting parties may cause our office to re-evaluate our comments and recommendations.

Thank you for the opportunity to comment and we look forward to participating in future Section 106 consultation for undertakings within the refuge. If we may be of further assistance, please contact Mark Tobias, Section 106 Compliance Manager, at (303) 866-4674 or mark.tobias@state.co.us.

Sincerely,

for Edward C. Nichols
State Historic Preservation Officer
ECN/MAI

History Colorado, 1200 Broadway, Denver, CO 80203

HistoryColorado.org

7-1

7-1. Whenever feasible, we will coordinate our Section 106 compliance with any review required under the National Historic Preservation Act.

7-2

7-2. We will be consulting with local governments, tribal governments, and other stakeholders as planning for the refuge complex proceeds.

7-3

7-3. Thank you for your comments and we look forward to working with the State Historical Preservation Office in the future.

8-1. Thank you for your comments and your ongoing participation in the CCP process.

8-2. We appreciate your ideas and suggestions for how we can partner with the Town of Crestone to advance the mission of the National Wildlife Refuge System and also benefit the community. We have addressed your specific suggestions as follows:

- Collaborative events with Crestone: We would be interested in exploring options for collaborating on events with the Town of Crestone. This outreach effort would be dependent on adequate refuge resources.
- Designated days for camera-only shooting: We would open the elk hunting (excluding archery area) and small game hunting areas during elk and rabbit hunting seasons to all members of the public. This would allow hunters and non-hunters to access these areas for wildlife observation, photography, and hunting.
- Opportunities to see bison: Although bison observation is considered under alternative D, under the preferred alternative (B), opportunities for viewing bison outside of the elk and rabbit hunting seasons would be limited to special refuge tours.
- More walking trails: We have clarified the maps and text about the trail system in the document. Current proposed trails include the following:
 - A) a 1-2 mile hiking loop trail near riparian areas by the visitor center, B) a 2-3 mile hiking linear trail (back and forth) along the two-track road heading south of the visitor center into the uplands, C) a 2-3 mile horse and hiking loop trail through the uplands in the northeast portion of the refuge near the access road, D) a 4-5 mile hiking loop trail through uplands and wetlands near the lower Cottonwood Creek system, and E) a 2.5-3.5 mile hiking loop trail adjacent to

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Crestonecreativedistrict@gmail.com



OCTOBER 29, 2014

Division of Refuge Planning
Attn: Laurie Shannon
P.O. Box 25486
Denver, CO 80225-0486

Dear Laurie, Ron Garcia, and members of the planning group:

We are writing in response to your invitation for public comment about the comprehensive plan for refuges in the San Luis Valley. This letter offers input for consideration in planning for the Baca Wildlife Refuge. We met you at the public comment session in Moffat in September, and were excited about the possibilities for our community, and wholeheartedly supportive of the improvements planned for the Baca Refuge.

In June, the Town of Crestone was awarded the designation of candidate Creative District by Colorado Creative Industries, and has entered a two year program in which our small community will be bringing all of our creative and community energies to bear in an effort to make our area more attractive for visitors, and more economically viable.

We honor the mission of the Refuges to provide wildlife habitat, and offer suggestions for enhanced visitor access with the intent that human presence in the refuge will be consistent with the mandates of the National Wildlife Refuge system.

Crestone, uniquely surrounded as it is by federal lands, is economically isolated and vulnerable. We must use every opportunity to work together with initiatives such as yours to assure a positive impact on our community. Our group offers several suggestions about how the Refuge can advance its mission of providing habitat for wildlife in a way that will also benefit our community:

1. Collaborative involvement with the Town of Crestone at the Refuge Visitor's Center to inform visitors of things to do and see beyond the refuge. Volunteers from the community might increase exchange and awareness between the refuge and the community.

8-1

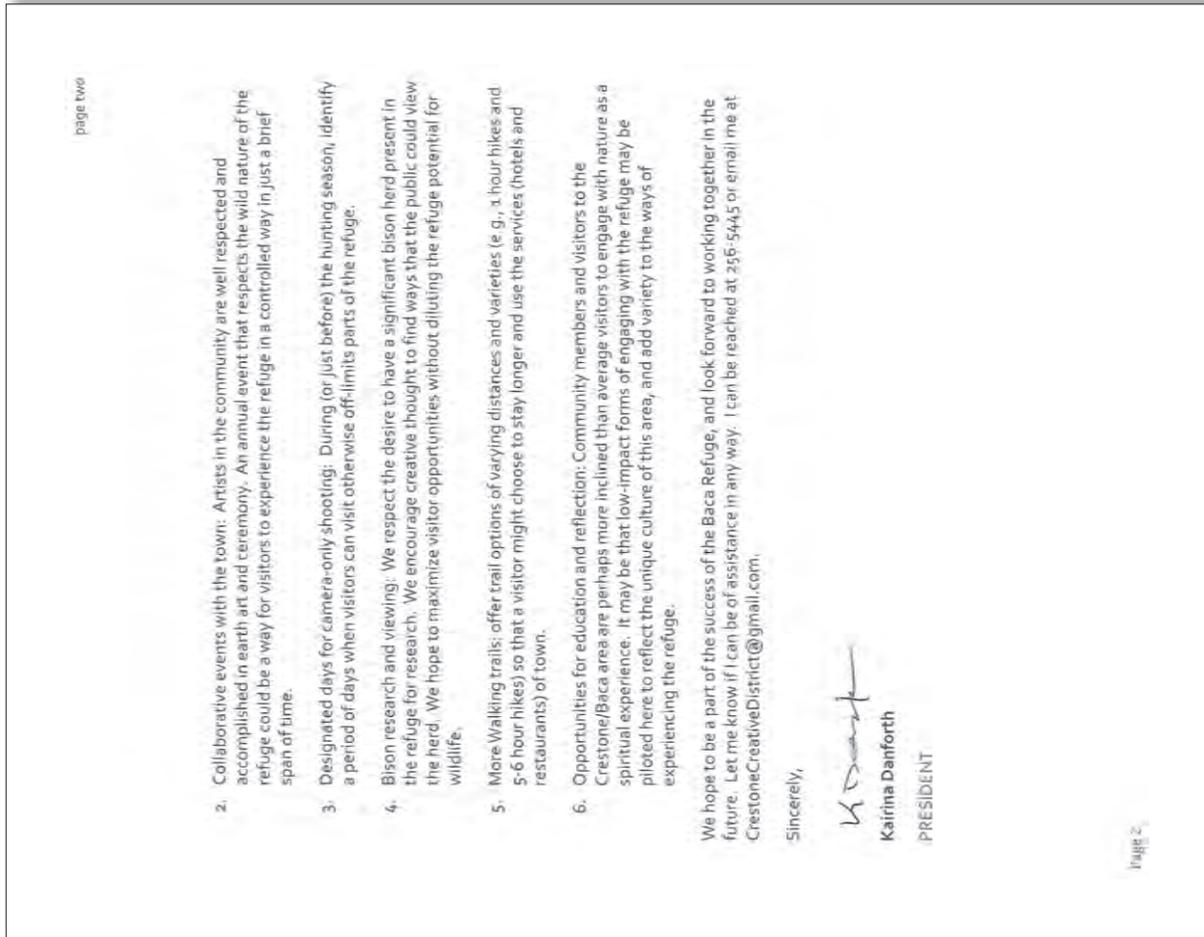
8-2

wetlands and through uplands near the upper Cottonwood Creek system. During hunting season when the elk and small game hunting areas are open to the public, these areas would allow for more space to explore the refuge. In addition, we would allow hiking and biking on the auto tour route, which ranges seasonally from approximately 15-22 miles (linear with a loop portion).

- More opportunities for education and reflection: We are interested in providing multiple opportunities for public education, contingent upon adequate refuge resources.

We are interested in assistance from volunteers to help us provide the public with wildlife and refuge education and interpretation. As long as presentations are compatible with refuge goals and objectives, we would welcome assistance from the Creative Council on future presentations.

8-3. Thank you for all of your suggestions.





Rockies and Plains Office
535 16th Street, Suite 310 | Denver, Colorado 80202 | tel. 303.825.0918
www.defenders.org

November 3, 2014

Submitted by email to: slvrefugesplanning@fws.gov

Ron Garcia, Manager/Laurie Shannon, Planning Team Leader
US Fish and Wildlife Service
Division of Refuge Planning
PO Box 25484
Denver, CO 80225-0486

Dear Project Leader Garcia:

On behalf of our 1.2 million members and supporters nationwide, Defenders of Wildlife thanks you for the opportunity to comment on the US Fish and Wildlife Service (FWS) Draft Comprehensive Conservation Plan (CCP) and Environmental Impact Statement. Founded in 1947, Defenders of Wildlife is a nonprofit organization dedicated to the protection and restoration of wildlife and plants in their natural communities. Defenders' distinguished record of leadership on America's conservation efforts includes supporting policies and practices that help maintain populations of all of North America's wildlife species. Defenders' 10-year organizational conservation benchmarks include: 1) Ensuring that more than half of the species currently listed under the Endangered Species Act are stable or improving; 2) Ensuring that 25 of Defenders-identified vulnerable species are secure in important ecosystems and focal landscapes; and 3) doubling the acreage of high-priority wildlife habitat that is managed for ecological integrity.

Defenders also has an extensive history in working on bison conservation issues, including membership in the IUCN North American Bison Specialist Group. Most recently, Defenders worked to bring Yellowstone bison to the Fort Peck and Fort Belknap Indian Reservations in Montana in 2012 and 2013, respectively, and to successfully defend legal challenges that opposed establishment of bison populations of Yellowstone genetic stock on these reservations and the legal authority of Montana Fish, Wildlife and Parks to manage wild bison. Defenders has worked with both the Fort Peck Fish and Wildlife Department and Fort Belknap wildlife department to initiate bison programs, expand the land base for those bison, and upgrade bison fencing. Defenders manages, with partners Montana Fish, Wildlife, and Parks and four other NGOs, a bison coexistence program on private lands near Yellowstone National Park to offer landowners financial and technical assistance to fence sensitive areas such as gardens or landscaping from roaming bison.

These comments will focus primarily on the FWS proposals within the CCP as they relate to bison and bison management, and on the Baca National Wildlife Refuge as opposed to other units of the San Luis Valley National Wildlife Refuge Complex.

The CCP does not provide a clear roadmap for bison conservation consistent with the Department of Interior Bison Initiative

While the refuge system manages for and has an extensive trust responsibility for a variety of species, the unique history of the creation of the Baca and its location within a high-elevation

9-1. Thank you for your thoughtful comments.

9-2. Thank you for your comments in support of some components of B2. We agree that the CCP does not provide a clear roadmap for bison conservation consistent with the DOI Bison Initiative (2008), nor was it our intent to do this. Instead, we attempted to provide a roadmap, in part at the request of DOI, to determine if Baca Refuge is in fact a suitable venue for department bison conservation efforts.

DOI continues to identify new lands within their ownership where bison conservation could potentially occur. The addition of Baca Refuge to the Refuge System appealed to bison conservationists because of the large area and because of its juxtaposition to other large landscapes owned and managed by DOI agencies. DOI also recognizes that bison conservation is not a specific purpose of the refuge and understands that we have concerns about the negative effects that existing large ungulates (elk) have on habitats for other wildlife species. DOI also recognizes that in general, it is the Service's policy not to pursue additional captive, fenced bison herds.

In a report describing DOI's bison conservation and future planning efforts (DOI Bison Report 2014), DOI asked us and the NPS to determine the potential role that Baca Refuge and Great Sand Dunes National Park and Preserve lands could play in overall DOI bison conservation efforts. Any proposal for bison management on a specific refuge unit should occur through the refuge unit's CCP or other management plan.

We have looked at several options for bison conservation or occurrence on the refuge. Under our preferred alternative, we have proposed to research the potential for bison occurrence on the Baca Refuge without negatively affecting the habitat for other wildlife. We have identified a specific research area that has roughly the same habitat type breakdown as the overall FWS and NPS landscape. Because of the potential difficulties of

using Service-owned bison (such as having captive, and fenced herd), we propose to utilize private or non-Service-owned bison to conduct the research. If our research shows that attempting bison conservation is not compatible with the purposes of the refuge, the bison can easily be removed from the landscape without affecting other bison conservation efforts. We realize that this research would be expensive but remain committed to ensuring that it occurs only if and when adequate resources are acquired to complete it without burdening the already scarce resources of the refuge. Over the long term, if we move forward with bison conservation on Baca Refuge, there could be adjustments to the boundary, but additional compliance under NEPA may be necessary.

We are actively engaged with NPS, CPW, and other partners in this planning process, and we will continue to be engaged in collaborative, cross-boundary, and landscape level management. However, differences in agency policies, mandates, timelines, management philosophies, and landscape objectives often preclude the same management techniques from being used in the interface areas.

On national wildlife refuges, we rarely venture into specific species (wildlife) management, trending more toward management of overall habitat health as it relates to various trust species that occur or should occur in those habitats. Typically this means managing for a variety of successional stages of most habitat types occurring on the refuges. Occasionally, as is the case with elk, we must engage in single species management because the species occurrence is affecting our ability to maintain and sustain varied or heterogeneous species and successional stages within specific habitats. However, single species management is usually expensive and time consuming.

While there are many benefits to having a joint plan as is suggested, we would also point out that the Improvement Act (refer to chapter 1) requires that all refuge units be managed under a CCP that fulfills the

grassland vegetation complex suggests that bison management should be an important component of the Refuge's management. Broadly, we would like the FWS and the US National Park Service (NPS), which is underway with a parallel planning process to amend its land use plan regarding ungulate management, to coordinate and collaborate to the maximum extent possible on developing wildlife management goals for the two planning units. This is a great opportunity to bring two Department of Interior agencies together to help restore America and Colorado's wildlife legacy. To this end we support, for bison, and in part, the Refuge's Alternative B2, together with the NPS's Alternative Concept 3, to the extent that they create habitat for bison on FWS and NPS lands. Together, these proposals could create thousands of acres of habitat for publicly-owned wild bison and opportunities for Coloradans to experience bison at a scale that would be an inspiring wildlife spectacle.

However, we would argue that the FWS cannot realistically execute bison management independent of the NPS. By all rights, planning for bison, and probably for a host of other species which transit the two jurisdictions, should be conducted under a single planning process that addresses the unique responsibilities and regulatory frameworks for both agencies. We therefore urge the Refuge to adopt additional language in its preferred alternative that would establish a common planning process for bison that would apply to both the FWS and NPS lands where bison are contemplated to be managed, and to incorporate by reference the outcome of that joint plan as part of the CCP to guide bison management going forward. This is not to say that the FWS should extend the planning for bison indefinitely. . . . indeed, Defenders argues that plans for bison have been too long delayed, and that the FWS proposal to study bison ecology for an additional 5-10 years is unreasonable and unlikely to enlighten the FWS regarding expected outcomes beyond what it knows today. We argue that the only way that we can know is to adaptively manage bison and make adjustments accordingly if deviations from resource objectives become a problem. We therefore cannot support Alternative B2 to the extent that it provides a timeline that is nearly beyond the current planning window and does not reference or provide a framework for coordination with the NPS or the potential expansion of bison habitat between the two adjacent blocks of land.

The CCP's overarching theme/ goals distorts the Baca Strategy

The three Refuge units that comprise the CCP are very different, and arguably linking these refuges together in a single management theme (an emphasis on migratory birds, Draft CCP at p.36) may not make sense. The two smaller Refuges (Alamosa and Monte Vista, 10,000 acres and 14,000 acres respectively) are highly manipulated and have been providing important waterfowl and migratory bird habitat for decades. Baca is 92,000 acres — a very different situation with much more conservation potential. Baca should be managed differently, to not only take advantage of its size but also its proximity to adjacent federal lands, which could provide a continuum of habitat from the valley bottom to montane forests. It is probably appropriate to emphasize discrete focused management for intensively managed areas that is not appropriate at the scale that Baca and its adjacent public lands presents. From its inception, the vision for the Baca and the adjacent NPS lands, and likely other land ownerships in the area, was a landscape-scale vision. It was not intended that the Baca's management focus would be on discrete, small scale species that are called out in the CCP (e.g., Draft CCP pp. 92-95: nearly every bird species is a riparian or wetland obligate). This focus would necessarily limit the vision with respect to a native ungulate such as bison, as the interactions of bison with the environment could be viewed as threats to optimizing the outcomes for some riparian species, instead of seeing how riparian species respond and fit within an ecologically restored landscape. It is not surprising then, that bison seem to be an afterthought in this plan instead of a focus of the plan.

9-5

The area identified in the CCP for bison may not provide be sufficient habitat for bison

The FWS has not provided any science as to its choice for area selected as bison habitat or estimates of forage production for this unit. While the perimeter identified seems to encompass a large amount of shrubgrass, it also appears to be about 40% sabkha (sandsheet) habitat, and virtually no wet meadow habitat, which is preferred bison habitat (Schoenecker 2012). These wet meadows are highly resilient to grazing (Schoenecker 2012) and would seem to be ideal bison habitat, as opposed to the sabkha, which is avoided by ungulates. Moreover, bison in proximity to but fenced out of adjacent prime habitat are more likely to break out of their confinement to access this habitat if it is not available to them. Finally, if the FWS is interested in understanding the relationship of ungulates and grazing and its effects on other Refuge resources then it needs to include the entire range of habitat types found on the Refuge, not simply shrubgrass and sabkha. The area identified is both inadequate in size and does not encompass actual bison habitat. We suggest that a much larger area that encompasses at a minimum the wet meadows of Cottonwood and Willow Creeks and ideally most of the area to the northeast corner of the Refuge be available to bison. To the extent that the area identified is the fullest extent of expected bison use on the Refuge, the alternative does not appear to represent a viable management option for bison and thus does not actually represent a “range of alternatives” as required by NEPA.

9-6

The FWS should reject alternatives that do not embrace a landscape-scale vision

The alternatives analysis is considered the heart of an EIS. 40 C.F.R. § 1502.14. The alternatives analysis should present the environmental impacts in comparative form, thus sharply defining important issues and providing the public and the decisionmaker with a clear basis for choice. Id. The lead agency must “rigorously explore and objectively evaluate all reasonable alternatives” including alternatives that are “not within the [lead agency’s] jurisdiction.” Id.; see also *Utahns for Better Transp. v. U.S. Dep’t. of Transp.*, 305 F.3d 1152, 1166 (10th Cir. 2002) (internal quotations omitted); *Citizens’ Comm. to Save Our Canyons v. U.S. Forest Serv.*, 297 F.3d 1012, 1030 (10th Cir. 2002); *Custer Cty. Action Ass’n v. Garvey*, 256 F.3d 1024, 1039-40 (10th Cir. 2001). It is through a proper alternative analysis that an agency is aided in making a reasoned choice by assuring sufficient discussion of all relevant issues and opposing viewpoints. See *Save Our Canyons*, 297 F.3d at 1030; see also *Colo. Envtl. Coal.*, 185 F.3d at 1171. Thus, when an alternative meets the purpose and need of the proposed action, it must be considered by the agency in the EIS. See 40 C.F.R. § 1502.13; *Custer Cty.*, 256 F.3d at 1041.

While an agency is not obligated to consider every possible alternative suggested, no matter how “remote, speculative ... impractical, or ineffective,” *Custer Cty.*, 256 F.3d at 1039-40 (citation omitted), the selection of alternatives is bound only by a “rule of reason” and some notion of “practicality.” See e.g. *id.*; *Utahns*, 305 F.3d at 1163; *Davis v. Mineta*, 302 F.3d 1104, 1120 (10th Cir. 2002); *Airport Neighbors Alliance, Inc. v. United States*, 90 F.3d 426, 432 (10th Cir. 1996). The key factor in determining whether an agency has prematurely eliminated a possible alternative is whether the alternative would fit the stated purpose for the agency action. *Utahns*, 305 F.3d at 1163.

The FWS needs to consider a range of alternatives that reasonably reflect the landscape-scale vision for the Baca and its environs. Alternative D, for example, which would create a small “bison zoo” enclosure, is not the vision the FWS should be projecting. It repudiates the notion of bison as wildlife and reinforces the misconception of bison as domesticated museum specimens, a misconception that has been the predominant public perception since the bison were nearly

mission of the Refuge System and the specific purposes of the refuge which is the primary reason for undertaking this process. On the other hand, Great Sand Dunes National Park and Preserve is managed under a 2007 general management plan (NPS 2007) in accordance with the NPS mission and other policies. The NPS’s current ungulate planning process is a subplan to the general management plan.

9-3. We disagree with your assertion that we cannot realistically implement bison management independent of the NPS. While this is not our intent (as we described under our preferred alternative (see response 9-1 and 9-2), we manage all of our bison herds as part of a larger metapopulation, so establishing a satellite population on Baca Refuge as described under alternative D is a reasonable alternative. Under alternative B we identified a 5-10 year timeframe to give ourselves the time to get a research project funded and implemented. If our research shows that bison occurrence on the refuge could be a realistic outcome for the future, it would not necessarily be beyond the current planning window of 15 years, although it could occur during a later phase of the CCP implementation.

9-4. We respectfully disagree with your assessment that the three units of the refuge complex are very different. In actuality, most of the habitats of the three refuges are very similar in all aspects except size. Overall, the habitats of Baca Refuge have been less manipulated in comparison to the other two refuges. Most of these habitats are represented on the other refuges as well. Objectives for these habitat types are very similar for the three refuges. In general, we aim to provide healthy habitats composed of heterogeneous plant species in a variety of structural conditions to provide for the life-cycle needs of a diverse array of wildlife. Because we manage the three refuges as a complex, resources including staff and equipment are often shared. It would not be efficient to manage otherwise.

We continue to share a landscape-scale vision for Baca Refuge and the lands surrounding it, and feel strongly that our objectives of maintaining healthy and diverse habitats support a productive and resilient overall landscape. By meeting these objectives, the habitats of Baca Refuge will complement those connecting habitats on neighboring lands. In contrast to your statement that Baca's management focus would be on discrete small-scale species, our objective (as mentioned above) is to promote habitat diversity and resilience. The species you indicate are being "called out" are merely done so because their presence and overall success in these habitats is an indicator of the overall health and suitability of these habitats for a wide array of wildlife (birds, mammals, fish, amphibians, and insects) that should thrive there. It is intentional that bison are not a focus of this plan, but rather a component.

We do not dispute that bison occurred on this landscape, but nowhere are there indications that bison remained here year-round. For these reasons, under the preferred alternative, we have proposed to research the effects of having bison year-round in these habitats to ensure that they remain healthy and diverse. In addition, many abiotic and biotic factors that historically played a role and were likely drivers in the function of this ecosystem, such as hydrology and alteration of predator and prey relationships, have been grossly altered. Therefore, we believe that bison effects on the existing landscape would not be the same, and perhaps not even comparable, to what they may have been historically. Therefore, our proposal is to research the effects of having bison here before wholesale decisions can be made.

9-5. Your assessment that we have not prescribed a bison research area that represents the entire range of habitats found on the refuge is incorrect. The area delineated by the proposed research boundaries contains a representation of most of the habitats (including wet meadows but not including dune fields) that exist in the

exterminated at the turn of the last century. The point of a large-scale vision for the Refuge should be to provide habitats for wild species in an ecologically restored, landscape-scale environment. Alternative D is the antithesis of this vision. If the "theme" is to provide public interaction with bison, then by all means provide access for the public to a landscape in which bison are acting at ecological scales. None of the alternatives provide for access to the bison. Many wildlife refuges and National Parks have bison present on the landscape and public hiking trails, drive-through roads, pullouts, picnic tables, campgrounds and so forth. With few exceptions, most due to poorly policed human behavior, are there any negative interactions between people and bison. Alternative D, arguably, is far outside the range of reasonable alternatives for bison because it fails to provide a "practical" difference. In essence, because it does not provide a viable alternative to address bison as wildlife on the landscape, it is neither practical nor does it fit within the stated purpose for the agency's mission and directives from the Department of Interior.

Moreover, FWS needs to consider alternatives in the context of its large-scale vision. Most of the alternatives offered for bison are indistinguishable from the "No Action" alternative. There is not a "reasonable" range of alternatives that might include different stocking rates, seasonal use, spatial use, etc.

Defenders strongly opposes Alternative D with respect to bison, and urges: 1) that the FWS provide a more thoughtful access plan that includes public access and viewing opportunities inside the bison enclosure; and 2) that the range of alternatives reflect a commitment to a large-scale vision, and thus reflect a true range of alternatives within that context.

The FWS should use wildlife-friendly management techniques when considering bison

There is little detail regarding how FWS intends to manage bison within the Refuge, but given the overall tone of keeping the bison separate from key habitats and divided from the NPS potential herd and habitat, Defenders would like to see language that supports the notion that the FWS will use wildlife-friendly fencing to contain bison inside any designated management area.

Defenders has worked extensively with a number of Tribes and others on bison containment, and can provide numerous examples and specifications for wildlife-friendly bison fencing. Defenders will not support any alternative that envisions bison separated from other wildlife by an impermeable fence.

The FWS should manage for full ecological restoration of bison

The FWS proposes to study bison for 5-10 years before implementing a full management plan for bison. This is despite the fact that studies have been ongoing for at least 5 years prior to this EIS (Schoenecker 2012; Wockner et al. 2014; Zeigenfuss et al. 2011) on bison and elk in this environment, on some of the same habitat. Moreover, the best available science tells us that adding bison, in most instances, does not result in overutilization of the most preferred habitats or an impact to the current numbers of other ungulates, such as elk (Wockner et al. 2014), at the level of stocking (e.g., 750-1,500 bison) and the current population of elk. Additional studies are simply not going to add to the level of refinement likely to significantly alter the conclusion that bison can and currently do interact in this ecosystem without significant detriment to other species or the vegetation. Undoubtedly there will be changes over time with respect to how bison and other species adapt to each other, but this is part of adaptive management, and will not be resolved by

greater sand dunes area and that would be made available to the bison if they were to occur on the refuge and the park. Not only is it a representation of the habitats available, but it represents these habitats in roughly the same percentages as occur in the overall area. If it were the desire of NPS to include the actual dune field itself, the Service would gladly restructure the proposed research boundaries (using park and refuge lands) to reflect this.

9-6. The purpose of Baca Refuge (Chapter 2) is to “restore, enhance, and maintain wetland, upland, riparian, and other habitats for native wildlife, plant, and fish species in the San Luis Valley.” We are to emphasize migratory bird conservation, take into consideration broader landscape conservation efforts, and use decreed water rights on the refuge in approximately the same manner that they have been used historically. As discussed above, we have taken into consideration all of these issues in our planning process.

In a CCP we do not prescribe various “stocking rates” as you have suggested as part of a range of alternatives. It should be noted that bison are classified as livestock in Colorado regardless of our intent to conserve the species, so your reference to stocking rates is not entirely clear. If we use livestock for grazing purposes as we currently do on the refuge complex, we do not specify the number of animal units per month. As stated above, we manage for habitat conditions. Specific descriptions about seasons of use would be identified in a habitat management plan (step-down plan to the CCP).

In terms of the numbers of bison that would occur on the refuge, under alternative D, we did state that it would be a small herd (less than 25) on about 2,600 acres and that the herd would be managed similarly to how we manage the herd at Sully’s Hill National Wildlife Refuge. We recognize that putting an orange box under alternative D or showing the yellow line depicting the research area under alternative B often results in the focus being

watching a small number of bison confined in a small space that is not representative of the ecotypes that occur over the entire Refuge.

We hope that the FWS will reconsider the alternatives for bison restoration in light of a clear need to establish goals and an outcome for bison management that reflects the larger vision of a landscape-scale approach to wildlife management in the San Luis Valley. To that end, Defenders requests that you revise the alternatives and choose a preferred alternative that addresses the comments we have provided, implementing a large-scale vision for wildlife conservation. We also hope that you begin to address this issue for the Baca by formally establishing a joint planning roundtable to define a landscape approach to managing bison that can be incorporated in a final management plan for the Refuge.

Thank you for the opportunity to comment. Defenders looks forward to working with the FWS on bison conservation and for the opportunity this CCP provides to establish a roadmap for an important public conservation herd.

Sincerely,



Senior Representative
Rockies and Plains Program
sforrest@defenders.org

References Cited

- Schoenecker, K. 2012. Ecology Of Bison, Elk, And Vegetation In An Arid Ecosystem. PhD Dissertation, Colorado State Univ., Ft Collins. 95pp.
- Wockner, G., Boone, R., Schoenecker, K.A., and Zeigenfuss, L.C., 2014. Modeling elk and bison carrying capacity for Great Sand Dunes National Park, Baca National Wildlife Refuge, and The Nature Conservancy’s Medano Ranch, Colorado: U.S. Geological Survey Open-File Report 2014-1200, 23 p., <http://dx.doi.org/10.3133/ofr20141200>.
- Zeigenfuss, K.A., K Schoenecker and LK Van Amburg. 2011. Ungulate Herbivory on Alpine Willow in the Sangre De Cristo Mountains of Colorado. Western North American Naturalist, 71(1):86-96. 2011.

9-10

9-11

on the boundary lines instead of what we are trying to achieve. Regardless of the alternative selected, a CCP is intended to be adaptive and some small modifications could occur. The primary purpose of bison management under alternative D would be to own and manage a small herd and to incorporate it into the theme of managing wildlife and habitat while maximizing opportunities for public use, so we felt it was important to identify what that would look like. The orange line simply identifies the general area where bison would occur.

Under alternative B, it would not make sense to prescribe specific numbers for bison research in the CCP. Similarly, we have not prescribed specific population objectives for the elk herd either. If our research shows that bison are compatible with all of our refuge purposes, the boundary and seasons of use could be modified, but additional compliance under NEPA may be required. However, we would have better data to support our decisions about the long-term sustainability of bison on the refuge rather than relying on existing literature that doesn't fully address some of our specific concerns (see response 9-8 below).

9-7. We have noted your comments opposing alternative D for bison management. It is a model that is used on some national wildlife refuges and national park areas today. Further, it has enabled us to analyze the costs of owning and managing a bison herd. Under both alternatives B (preferred alternative) and C, our rationale and strategies have clearly left the door open to implement complementary bison management approaches with our partners. We have updated the final CCP and EIS to include current information and have tried to clarify our actions where possible. Since the NPS has not made any final decisions, it would be

inappropriate for us to make any other assumptions at this time.

We have heard from the tribes, many local residents, and other stakeholder groups in the San Luis Valley about whether bison should occur on the refuge. Some residents are adamantly opposed to us pursuing bison management on the refuge at this time given our resources and the issues related to elk management. Others support the idea of having bison on the refuge, and we are considering all the opinions expressed on this issue in our final decisions. With respect to public use, we made some modifications to the trails proposed under alternatives B and D. We have also clarified in the final CCP and EIS that during hunting season, the refuge would be open to other nonconsumptive uses like wildlife observation, enabling visitors to view bison and other wildlife (alternatives B and D). At other times, visitors may or may not see the bison depending on where the herd is located. This is similar to other public lands where bison occur.

9-8. We agree that wildlife-friendly techniques should be employed when managing bison. We have clarified in the final CCP and EIS that other wildlife would be able to move freely through any bison containment area.

9-9. Although much research has occurred here that has certainly been helpful in our discussions with our partners, it has not addressed the specific questions that we have about the effects bison would have on the habitat. Much of the research you point to simply suggests that the carrying capacity of these habitats has not been met, but does not describe how habitat changes resulting from year-long bison occurrence would be suited to the life-cycle needs of other wildlife, including trust species that we are mandated to provide for under the purposes of the refuge. We have also updated our bibliography to include some of the studies that were finalized about the time we published our draft CCP and EIS.

9-10. Since 2010, the NPS has been a cooperating agency in our planning process. Although the NPS process has not been on the same timeline as our CCP process, we have also been a cooperating agency in the NPS's ungulate management planning process. Both of our agencies have held public workshops to discuss the relevant issues related to bison occurrence and conservation on the landscape, and we would continue to welcome input on this important issue. We are open to different venues like roundtables for future discussions. While we need to move forward with finalizing the CCP, we also don't think the conversation about landscape management ends with the decisions being made in this planning process.

9-11. We appreciate the thoughtful comments submitted by the Defenders of Wildlife on our planning process.



Friends of the San Luis Valley National Wildlife Refuges

P.O. Box 857
Monte Vista, CO 81144
(719) 589-4021 extension 150

October 19, 2014

10-1

Please accept these comments on the draft Comprehensive Conservation Plan (CCP) and Environmental Impact Statement for the San Luis Valley National Wildlife Refuge Complex. We would like to thank all of the staff that participated in the planning process. We are pleased with the balanced approach presented in the Draft Proposed Action in Alternative B that emphasizes wildlife and habitat protection, while at the same time proposes to increase nonconsumptive public access at all three refuges in the complex.

10-2

We believe that the refuges within the San Luis Valley Complex serve an important role within the proposed San Luis Valley Conservation Area. The three refuges protect critical wetland habitats in an increasingly arid region, are a large part of a protected landscape that encompasses several hundred thousand acres, provide important recreational opportunities, and protect invaluable cultural and historic resources.

10-3

Our comments are divided into three topics: public access, management, and outreach

Public access

We support efforts to increase nonconsumptive, wildlife-dependent public uses on all three refuges. We are particularly pleased to see proposals in Alternative B that would open existing roads and trails to bicycling and hiking, and the proposed development of additional trails. Biking and hiking facilitate wildlife-dependent uses, and increasing public access will help raise awareness of the local refuges and help expand the constituency for all three refuges. We were also pleased to see the proposed addition of wildlife viewing towers at the Monte Vista Refuge and the proposed road across the Alamosa refuge that will provide opportunities for wildlife observation and better access to the Bluff overlook.

10-4

Although we are not advocating for Alternative D that would maximize public use opportunities, there are two proposals in Alternative D that we believe merit inclusion in the final plan.

1. Irrigating areas close to public access to enhance wildlife viewing whenever possible
2. Developing safe access for fishing along the Rio Grande River on the Alamosa Refuge. When the refuge purchased the Lillpop ranch on the eastern boundary of the Alamosa Refuge, access was restricted to a popular fishing area on the Rio Grande. We encourage the Service to restore that historic access.

10-1. We appreciate your thoughtful comments on the draft CCP and EIS as well as the ongoing support and contributions of the Friends of the San Luis Valley National Wildlife Refuges.

10-2. Thank you for your comments in support of alternative B. As a result of public comments, we have made some changes to alternative B (the preferred alternative) in the final CCP and EIS.

10-3. We agree with your assessment of the importance of the refuges in an increasingly arid region. Differences in water rights on Monte Vista and Alamosa Refuges can limit when and where we move water. On portions of Alamosa Refuge, water management is restricted to the irrigation season (April 1–October 31). In areas where we can manage the habitat through prescribed burning, haying, or grazing, they will be dry for a portion of the year. As we rotate management of the wetlands, we always provide suitable habitat elsewhere for wetland birds, but wildlife observation opportunities may be affected. Under our alternatives B and D, increased habitat management and wildlife viewing opportunities would be balanced with the need to minimize disturbance to wildlife. For example, instead of a static observation deck, it may make more sense to use moveable blinds (CDOW 2007).

Due to the declining snow pack, climate change, new groundwater regulations, and increasing costs, there is a lot of uncertainty over how much water we will have in the years to come. Our preferred alternative (B) is intended to be adaptive to the ongoing and predicted changes in water availability. We would use our water rights in the most efficient manner to provide water to the priority wetlands and to provide viewing opportunities for the public.

10-4. Thank you for your comments.

10-5. Fishing Access - Based on the input we received on the Draft CCP and EIS, under alternative B we would work to open an area above and below the Chicago Dam

to bank fishing. People fished here in the past when it was in private ownership. Even in years when the Rio Grande is very low, the Chicago Dam provides consistent water upstream for a non-native fishery. We would work with our partners to develop appropriate access and facilities as needed.

10-6. We have learned from the public that Baca Refuge remains an intriguing place as it has been off-limits for over a hundred years to all but those who have worked there. We believe that by providing limited access, we can allow the public to experience the landscape firsthand and can convey the importance of this area for wildlife in the San Luis Valley.

We think there is some misunderstanding about our proposal for limited hunting opportunities on Baca Refuge, and we have provided additional information in the final CCP and EIS. We are proposing to allow limited small game hunting (rabbit) primarily in the northwest and southwest portions of the refuge where hunting occurred prior to the area becoming a national wildlife refuge. These are lands that were formerly owned by the Colorado State Land Board. When we acquired these lands, hunting was temporarily discontinued while we were assessing the resources on the refuge. We heard from many local residents who were upset because their wildlife-dependent uses of these public lands were curtailed. Because the public historically had access to these lands and because small game hunting is an appropriate use of refuge lands, we felt that we could open these areas to hunting without interfering with the purposes for which the refuge was established. We anticipate that the number of small game hunters who would hunt these areas would be very small.

Currently, the amount and distribution of elk on Baca Refuge are resulting in negative impacts to the habitats of other native species that we are mandated to protect. By implementing an elk hunting program, we could provide a high-quality wildlife-dependent use of the refuge

We are pleased to see that Alternative B includes plans to open the Baca Refuge to public use. The Baca is a mysterious place for many people in the San Luis Valley because of the lack of historic access, and there is tremendous interest among the local population to explore the Refuge. We support providing limited public access on the Baca Refuge as described in Alternative B, with a hiking trail near the Visitor's Center, a short auto tour route, and hiking trails near Cottonwood Camp. But we are concerned about opening the Baca to small and big game hunting for two reasons:

1. The Baca Refuge is currently severely understaffed. Allowing hunting will require additional staff time to interact with hunters and law enforcement, both of which take time from existing management responsibilities.
2. The Baca contains significant historic and cultural resources. Allowing unsupervised hunters to roam freely across the refuge will expose these resources to additional risk of damage and theft.

We do not think allowing hunting on the Baca is a good idea until additional staffing is provided, but we support guided dispersal hunts for elk on the Baca Refuge.

Management

Both the Alamosa and Monte Vista Refuges were established under the Migratory Bird Conservation Act, but the historic emphasis on both refuges has been on waterfowl and water birds. We urge the Service to expand their emphasis to include migratory songbirds, many of which are declining due to increased threats in North America and in their winter habitats in Central and South America. To this end, we ask that the emphasis on water management be expanded to include maintaining riparian vegetation and to maintaining existing trees beyond riparian areas, even if the trees are nonnative. Trees are a limited resource in the San Luis Valley, and they provide important habitat for migratory songbirds.

We agree with the proposal to continue to grow grain on the Monte Vista Refuge. The proposed reduction in grain production in Alternative B to approximately 190 acres seems like a reasonable balance to provide supplemental food to migrating Sandhill cranes and other waterfowl, while attempting to reduce the impacts on neighboring agricultural lands by cranes and other waterfowl. The Monte Vista Refuge contains adequate lands in native vegetation and the farmed fields enhance wildlife viewing opportunities for visitors.

We have continued concerns about the proposal to establish a semi-free-ranging herd of bison on the Baca Refuge in Alternative B. Considering the current management challenges that the native elk population poses on the Baca Refuge, we do not understand why the Service is proposing to add another ungulate to the refuge. To our knowledge, the Service does not seem to have any clear management goals or purpose for reintroducing bison. This proposal seems to be driven primarily by political pressure from the Nature Conservancy, which owns property adjacent to the Baca Refuge. If the justification for reintroducing bison to the Baca Refuge is to restore a missing component to the landscape, then we hope that the Service will seriously

10-9

(continued)

consider reintroducing both gray wolves and grizzly bears to restore a fully functioning ecosystem.

If bison are introduced on the Baca Refuge, we would hope that a scientific approach is used to study the proposed impact of bison on the refuge. Again, we are concerned about diverting already limited staff to managing a semi-free-ranging herd of bison. We hope that the impacts of any bison on the Baca would be studied carefully, and that the bison would be removed if no measurable benefit to the habitat was observed. To us, a “semi-free-ranging” herd of bison sounds frighteningly like some kind of open-air bison zoo, which seems well outside the mission of the US Fish and Wildlife Service.

We support the proposed management plans in Alternative B to:

- Continue environmentally-sound weed management practices that minimize impacts on wildlife.
- Restore historic water flow patterns where possible to restore and maintain wetland habitats. Restoring historic flows to the playa wetlands on the Baca Refuge is especially important. In our opinion, there is plenty of acreage in irrigated wet meadows on the Baca. Playa wetlands are an increasingly rare habitat in the San Luis Valley, and playa wetlands appear to play an important role for some migratory bird species.
- Increase the use of fire as a management tool to help establish habitat heterogeneity in upland habitats.
- Designate 13,600 acres along the eastern boundary of the Baca as wilderness to add an additional layer of protection to important upland habitats for wildlife.

We hope that refuge staff can increase monitoring efforts on all three refuges to provide the data that will guide sound scientific management, and that these data are used to adapt future management to growing uncertainty about climate and local precipitation patterns.

Outreach

One of our goals for many years has been a new visitor center at the Monte Vista Refuge. The previous Visitors Center at the Alamosa Refuge is currently staffed a few days a week by volunteers from the Friends group during the summer. The majority of visitation occurs at the Monte Vista Refuge, which is also the site of a fall Kids Crane Festival and a spring Crane Festival, which together bring thousands of visitors to the refuge. The current refuge office in the former Lilloopec Ranch headquarters is difficult to find, unsafe to access because of a railroad crossing with remotely-controlled trains, and is poorly suited as a federal office building. A new Visitors Center at Monte Vista would allow the refuge staff to increase visitor services to the public.

that could redistribute elk on the landscape and increase elk hunting opportunities on lands on and off the refuge. By keeping elk away from sensitive refuge habitats, other species on the refuge, including fish and migratory birds, would benefit.

We agree that the refuge contains important cultural and historical resources that must be protected. Any elk hunting program that is developed and implemented on the refuge would have to be compatible with refuge purposes and commensurate with the resources available to effectively manage it (refer to appendix D). We anticipate that the hunting areas of the refuge would be opened to only a small number of big game hunters per season. Permitted hunters would be required to attend an informational and regulatory briefing prior to having access to the hunting areas of the refuge. Access would be by foot, horseback, or bicycle only to eliminate potential damage by vehicles. In addition, retrieval of downed animals would be similar.

10-7. Many of the tree species on Monte Vista Refuge were planted in association with homesteads and farm fields. Some of the species are nonnative invasive species, such as Russian olive, Siberian elm (Chinese elm). We will continue to remove and treat these species to prevent them from spreading into the Rio Grande waterway and other areas. Most of these trees have succumbed to declining groundwater tables and reduced irrigation, and the remaining nonnative trees are expected to fade away with time. We do recognize the importance of trees for migrating songbirds and some nesting raptors. When possible, we would provide some water to the established trees and shrubs near the County Road 8S pullout. We would work with you and other partners to investigate whether we could establish a stand of native cottonwood trees and associated shrubs next to the Monte Vista office. The location would offer excellent wildlife viewing, photography, and

education opportunities that could be incorporated into the expanded trail system proposed in this CCP.

10-8. Thank you for your comments. We have updated the objectives on sandhill cranes in the final CCP and EIS to reflect a growing need for more research and monitoring on the amounts of available grains and natural foods to support cranes on their journeys north and south to breeding areas and wintering areas.

10-9. American bison conservation continues to be a high priority for the Department of Interior (DOI) and the Service. As such, we continue to identify new lands within DOI ownership where bison could potentially be reintroduced. The addition of Baca Refuge to the Refuge System has appealed to many bison conservationists, including those in the DOI and our agency, because of the large landscape comprising the refuge and because of its proximity to other large landscapes owned and managed by DOI agencies. However, DOI recognizes that bison conservation is not a specific purpose of Baca Refuge and that elk are already damaging the habitats of other species there. DOI asked us and the National Park Service (NPS) to determine the suitability of refuge and Great Sand Dunes National Park and Preserve lands for DOI bison conservation efforts (DOI Bison Report 2014). Therefore, we propose to research the potential for bison conservation at Baca Refuge without negatively affecting the habitats of other wildlife.

We have identified a specific research area that has roughly the same habitat type percentages as the overall landscape of our lands and NPS lands. Because of the potential difficulties of using Service-owned bison, we propose to utilize private or non-Service owned bison to conduct the research. If our research shows that bison conservation on refuge lands is not compatible with the purposes of the refuge, the bison can easily be removed from the landscape without affecting ongoing Service-wide bison conservation efforts. We realize that this

We fully support the proposed increases in education and outreach activities contained in the proposed Alternative B. The Friends mission is primarily educational outreach and raising awareness of our local refuges. Restoring an Outdoor Recreation Planner (ORP) position in the complex would help us increase educational outreach programs to local school children, community members, and visitors. One of our long-term goals is to develop outreach programs and educational materials that emphasize the historical significance of the Baca Refuge, including its archaic, pre-European, and Hispanic history.

Although this is not part of the CCP, we encourage the new Project Leader and Assistant Project Leader to continue the Service's historic commitment to partnering with other local federal and state resource management agencies, and cooperating nonprofits in the San Luis Valley.

Our hope is that dedicated funding will follow the proposals contained in the CCP. When the Baca Refuge was acquired, the complex absorbed the additional costs of operating and maintaining the Baca with no increase in funding. One of the casualties of this budgetary crunch was the loss of a full-time ORP position, which was converted to a Refuge Manager position for the Baca. The loss of the ORP position had a lasting impact on our outreach and education efforts in the San Luis Valley.

It seems to us that if no funding is allocated to implement this plan, that this entire, 4-year planning effort will have been a colossal waste of time, effort, and taxpayer resources.

Respectfully,



Tim Armstrong
President

10-12

10-13

research would be expensive, but remain committed to ensuring that it occurs only if, and when, adequate resources are available to complete it without taxing the already scarce resources of the refuge.

10-10. We share your excitement about the potential for restoring historic water flows to the playa wetlands of Baca Refuge. However, we remain realistic in recognizing that this will be no easy task. In recent decades, Baca Refuge, like other areas of the San Luis Valley, has experienced diminished runoff. Although the refuge has significant water rights, it has been several years since there has been enough runoff water to satisfy those water rights. As a result, many hundreds or even thousands of acres of historically wet areas have remained dry. Playa wetlands once received tail water from several sources, including La Garita Creek, Saguache Creek, San Luis Creek, Rito Alto Creek, and the creeks that flow directly onto the property (and for which the refuge has the water rights). Now, the only sources of water available for the playa wetlands are the creeks that flow directly off the mountains and onto the refuge (and for which we have water rights). Although refuge water rights allow for irrigation of several hundred acres of playa habitat, there has not been sufficient water in the system to irrigate this habitat. Our decision to reduce the amount and duration of wet meadow habitats irrigated annually to attempt to satisfy some of the water rights further down on the systems would be our best approach for getting water to these historic wetlands. In addition, we are committed to working with partners and neighbors such as the U.S. Bureau of Reclamation to minimize impacts to these areas by their operations as well.

10-11. We appreciate your support of a new visitor center and headquarters area. The final siting of the visitor center would be determined with more detailed site planning and could be located at either Monte Vista or Alamosa Refuge.

Comment
number

LETTER 10—Friends of the San Luis Valley National Wildlife Refuge

RESPONSE

10-12. Thank you for your support for increased education and outreach activities.

10-13. We are hopeful that having an approved CCP will aid us in securing necessary resources from both within the Service and through other partnership opportunities. Community support is critical to helping us achieve the vision for the refuge complex, particularly given the uncertainty about water availability and budget constraints. Once again, thank you for all of your comments.

11-1. We appreciate your thoughtful comments on our Draft CCP and EIS.

11-2. With regards to expanding the elk archery hunting area to the west boundary of the refuge, it has been our experience in the past that when trying to redistribute elk on the refuge, they rarely move to the west. Typically, when pressured, they will move north onto private land or east onto NPS lands. Currently, and into the future, CPW through the Mt. Blanca HPP has the ability to use hunt coordinators to manage elk movements on the western part of the refuge that were formerly owned by the Colorado State Land Board. We believe that elk management through hunting in these areas where we share a boundary with several private landowners would be best realized using the highly controlled process of the HPP coordinated hunts that are designed with a specific purpose.

During this planning process, we heard many comments from our neighbors to the west saying that they would not support wide-open big game hunting along our shared boundaries, and we feel that this would be a good compromise for meeting our habitat objectives while being mindful of our neighbors' concerns. All areas of the refuge are subject to FWS- and CPW-specific non-hunter related actions designed to redistribute elk. We anticipate that despite implementing a well-thought-out public hunt plan for the refuge, we will also need to use non-hunter actions to be completely successful in managing elk for habitat maintenance.

11-3. Under alternatives B, C, and D, we would begin implementing the hunting program on Baca Refuge upon approval of the CCP (by year 1-3), and we clarified this in the final CCP and EIS. We would address the specifics in the hunt plan, and then the hunting regulations will be published in the Federal Register. The hunting program is contingent on obtaining the resources necessary to implement it. There are nuanced differences in the hunting programs under alternatives



0722 South Road 1 East
Monte Vista, CO 81144

November 2, 2014

San Luis Valley National Wildlife Complex
Comprehensive Conservation Plan Comments
Ms. Laurie Shannon, Planning Team Leader
PO Box 25486
Denver, CO 80225-0486

Dear Ms. Shannon,

The Mount Blanca Habitat Partnership Program Committee (Mount Blanca HPP) would like to thank you for the opportunity to review and comment to the SLV NWR Comprehensive Conservation Plan. As a goal for MB HPP, we are involved with big game damage issues and landowner relations. Our comments will be centered on elk management.

Mount Blanca HPP would like for the US Fish and Wildlife Service to consider the expansion of the archery area to extend to the western Baca NWR boundary referencing page 53 Baca NWR map. This would help alleviate potential elk game damage issues west of Colorado Highway 17.

Mount Blanca HPP supports D1-D4 on page 101 to maximize hunting opportunity on Baca NWR.

Mount Blanca HPP supports alternative D7 on page 110 to establish hunting access within 3 years. Unit 82 needs to have hunter access established as soon as possible in order to have a greater chance to maintain the elk population objective.

Sincerely,

Mount Blanca HPP Committee

11-1

11-2

11-3

**Comment
number**

LETTER 11—Mt. Blanca Habitat Partnership Program

RESPONSE

B and D, but overall, the general implementation time-frame would be similar. We would be relying heavily on the resources of CPW and may also be asking for support from the Mt. Blanca HPP to implement the hunting program.



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October 27, 2014

Laurie Shannon
U.S. Fish and Wildlife Service
Division of Refuge Planning
134 Union Boulevard, Suite 300
Lakewood, Colorado 80228

Subject: Comments on the Draft Comprehensive Conservation Plan and Environmental Impact Statement (Draft CCP)

Dear Ms. Shannon:

The Nature Conservancy would like to thank you for the opportunity to comment on the Draft CCP. As you may recall, we also submitted comments in February 2012 on the Draft Alternatives and in April 2011 during scoping. This letter builds on our past comments.

Our most significant comments pertain to bison. We fully support FWS's inclusion of bison management in its preferred alternative. We do include requests and recommendations for bison restoration, coordination of bison management with the National Park Service, and expansion of the boundary for the bison area.

Thank you for your consideration. Please don't hesitate to contact us with questions.

Best regards,

/s/ Tim Sullivan

Tim Sullivan, State Director
The Nature Conservancy in Colorado

Cc: Ron Garcia, Baca Refuge Manager and Suzanne Beauchaine, Alamosa and Monte Vista Refuges Manager

12-1

12-1. We appreciate your thoughtful comments and are grateful for the committed support we have received from The Nature Conservancy over the years.

- 12-2.** 12-2. Thank you for your comment.
- 12-3.** We engage in collaborative, cross-boundary, and landscape level management whenever possible. We have been completely engaged with NPS and CPW in our individual planning efforts. While implementing the CCP, we would continue coordinating and working with our neighbors (including NPS and TNC) along our inter-facing areas. However, differences in agency policy, mandates, management philosophies, and landscape objectives often mean that the same management techniques cannot be used across boundaries in these inter-face areas. In general, on national wildlife refuges, we rarely venture into single-species management and focus more on management of overall habitat health as it relates to various trust species that occur or should occur in those habitats. Typically, this means managing for a variety of successional stages of most habitat types occurring on the refuges. Occasionally, as is the case with elk on the refuge complex, we must engage in single-species management when a particular species is affecting our ability to maintain and sustain varied or heterogeneous successional stages within specific habitats. Single-species management is usually expensive and time consuming.
- 12-4.** The primary reason for not including lands currently owned by TNC is that we have no ability, agreement, or control to set objectives for or to prescribe habitat management on these lands. However, those portions of TNC land that occur within the authorized acquisition boundary of Baca Refuge contain habitats that are similar to those described in this CCP. Therefore, if and when we acquire these lands, we would manage those habitats consistent with the goals and objectives established in this CCP. This would also apply to the lands we have recommended for wilderness protection.
- 12-5.** We understand your interest in having bison on Baca Refuge. American bison conservation continues to

GENERAL

- 1.** Thank you for distinguishing management of the Baca Refuge from that of the Monte Vista and Alamosa Refuges. Our past comments had suggested making this distinction. The change is very helpful.
- 2.** We urge FWS to initiate and/or participate in cross-boundary wildlife and habitat management efforts, and to state such intent in the CCP. Our past comments emphasized this as well. We fully support FWS's statement "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" (p.53). We also support FWS's stated intent to manage elk collaboratively (p.99-100).
- We request that FWS also consider collaborative and cross-boundary management of elk, bison, fire, and invasive species (see below), and state such an intent accordingly. The refuges provide some of the most important wildlife habitat in the entire Valley, particularly since they lie adjacent to other lands with important conservation values such as Great Sand Dunes National Park and The Nature Conservancy's properties. Managing resources across boundaries will help ensure the conservation values are maintained and restored across multiple land owners and managers. Cross-boundary management of resources such as bison and elk is also consistent with the original vision for the suite of federal lands in the San Luis Valley.

- 3.** Clarify whether this plan covers the lands currently owned by TNC that FWS plans to acquire and add to the Baca Refuge, and explain how these lands will be managed if and when FWS acquires them. We urge FWS to describe the management of these lands, including biological and cultural resources. Regarding the latter, the current CCP language does at least address management of the Trujillo house. We support FWS's stated intent to "...establish new partnerships...that can help us achieve our goals and objectives. For example, work with NPS to interpret and assist us with managing the Pedro Trujillo homestead on the Baca Refuge" (p.152). TNC and its donors have invested \$200K into the restoration of this homestead. We recommend that FWS allow NPS to manage this and other cultural resources, because NPS has experience with cultural resource management.

BISON

- 1.** We support FWS's inclusion of bison within the preferred alternative and urge FWS to retain bison management in the final CCP. We support the presence of a year-round herd on the Baca and an appropriate monitoring program. Restoring bison to the refuge is in keeping with the legislatively-established purpose of the refuge, "to restore, enhance, and maintain wetland, upland, riparian, and other habitats for native wildlife, plant, and fish species in the San Luis Valley" as well as the requirement to "take into consideration the role of the Refuge in broader landscape conservation efforts" (16 U.S. Code § 410hh-4). We anticipate that monitoring will

LETTER 12—The Nature Conservancy, page 3 of 7

RESPONSE

be a high priority for us and the Department of Interior (DOI). The DOI continues to identify new lands within its ownership where bison conservation could potentially occur. The addition of Baca Refuge to the Refuge System appealed to DOI and other Service bison conservationists because of its large land area and its proximity to other large landscapes owned and managed by DOI agencies (DOI Bison Conservation Initiative 2008), DOI Bison Report 2014). However, DOI recognizes that bison conservation is not a specific purpose of the refuge and that we have concerns about the negative effects on habitats from elk already on Baca Refuge. DOI also recognizes that in general, it is the Service's policy not to pursue additional captive, fenced bison herds. Bison management on a specific Refuge System unit occurs through the unit's CCP or other management plans authorized under the Refuge Improvement Act of 1997. However, in a report describing DOI's bison conservation and future planning efforts (DOI Bison Report 2014), DOI asked the Service and the National Park Service (NPS) to determine the suitability of refuge and Great Sand Dunes National Park and Preserve lands for DOI bison conservation efforts. We have proposed to research the potential of bison occurring on the Baca Refuge to ensure their occurrence does not negatively impact the habitats of other wildlife that rely on these areas. We have identified a specific research area that has roughly the same habitat type breakdown as the overall FWS and NPS landscapes. Because of potential difficulties of using Service-owned bison, we propose to utilize private or non-Service-owned bison to conduct the research. If our research shows that bison conservation on the Baca Refuge is not compatible with the purposes of the refuge, the bison can easily be removed from the landscape without affecting other bison conservation efforts. We realize that this research would be extremely expensive, but we remain committed to ensuring that it occurs only when adequate resources

demonstrate positive benefits to plants, animals, and wildlife, and that this information will inform options for management (Sanderson, et al., 2008).

2. **Consistent with the Department of Interior (DOI) Bison Conservation Strategy, restore bison for the purpose of conserving this species – in addition to its ecosystem benefits (e.g., grazing function) – and state such in the CCP.** The DOI Bison Report (2014) states that while the bison is no longer threatened with extinction, DOI is still committed to continuing bison conservation and restoration. The plan specifically calls out the SLV landscape that includes TNC, NPS, and USFWS lands as a possible area for innovative planning and partnerships (p.25-28) (National Park Service, 2014).

12-6

The CCP suggests that bison would be allowed only to the extent that they benefit native species and habitats (p.97-98). There is extensive literature on the benefits of bison on grasslands and many shrublands (Gates, Freese, Gogan, & Kotzman, 2010). Clearly, with inappropriate consideration to carrying capacity, bison can cause land degradation. But where bison goals are integrated into other conservation value goals of an area, especially restoration of ecological processes, conservation outcomes have been demonstrated in a large number of ecosystem types (Sanderson, et al., 2008). NPS, USGS, and Colorado State University have been engaged in extensive and long-term research to assess carrying capacity, interaction effects with elk, and possible restoration scenarios in this landscape.

12-7

3. **Coordinate bison management with NPS and state the intent to do so in the CCP, and choose herd size and location based in part on potential cross-boundary management.** The CCP acknowledges that NPS is currently considering alternatives for bison management on park lands and that such a decision has not already been made. We ask that FWS also clearly state that it will coordinate with NPS on planning and management of bison.

If both NPS and FWS approve herds on their lands, management of bison would be much more efficient and cost-effective if the agencies coordinated across their boundaries. Such coordination would also enable NPS and FWS lands to sustain a herd of 1,000 or more, which the Department of Interior Bison Conservation Initiative (BCI) recommends, even if FWS retains the bison area shown in Figure 18. As the BCI states, "Maintaining or creating herds or metapopulations in excess of 1,000 animals is considered as likely essential to the long-term genetic viability of individual bison within the herds" (p.9) (Department of Interior, 2008). Such a strategy is more in line with goals of restoration or conservation of bison.

Although we strongly support NPS restoration of bison on NPS lands, should NPS decide against this, we still urge FWS to do so on its own. Such an action would also be in alignment with the BCI and the DOI reports, regardless of herd size. The BCI states, "Where range will not support populations of 1,000 or more animals, the creation of satellite herds will be considered to increase the viable population size. This should be pursued using animals of appropriate status from available sources" (p.9) (Department of Interior, 2008).

12-8

4. **Reconsider the need for additional bison research.** Extensive research has already occurred within the landscape (Schoenecker, Ecology of bison, elk and vegetation in an arid ecosystem, 2012) (Schoenecker, Nielsen, Zeigenfuss, & Pague, 2014). In addition, NPS is conducting and evaluating research for its Ungulate Management Plan.

12-9

5. **Revisit the proposed bison boundary.** It is unclear on what basis the proposed boundary for bison was designed. Any design for bison should be based on goals established for bison restoration and conservation, as well as potential coordination with NPS (see above) and TNC and made clear in the plan. As an overarching principle, TNC urges FWS to adopt the largest possible boundary for bison restoration. The larger the boundary, the greater the potential herd size, and the more benefits to native habitat that may ensue from bison's activities. The current zoning choice (i.e., bison research area) would not lend itself to the restoration of bison as a meaningful ecological process in the landscape. Wherever bison are located on the refuge, they could be managed using a variety of tools such as fencing and hazing.

In keeping with our "the larger the better" recommendation, we strongly urge FWS first and foremost to expand the bison area to encompass the entire refuge. Based on bison range maps, the former range of bison covers the entirety of the San Luis Valley and in fact the state of Colorado (except for the San Juans). Such an expansion should not preclude FWS's ability to provide other uses such as migratory bird habitat, elk hunting, small game hunting, etc. By allowing for bison across the refuge, FWS could on its own support a herd of more than 1,000, which would be in accordance with the BCI recommendation.

As a second choice we recommend that the research boundary encompass the primary habitat for bison. USGS has modeled high-quality habitat and we recommend its use (Schoenecker, Nielsen, Zeigenfuss, & Pague, 2014). In addition, inclusion of lands that have currently sustained bison (i.e., the TNC lands and federal lands within the existing bison fence) should remain part of the research area.

12-10

6. **Allow bison to roam freely within their allotted space.** It appears that FWS also supports this goal with its statement, "By semi-free ranging, we mean that although bison would still be subject to annual roundups and removal of animals to maintain the herd size within the population level defined in the study design, the overall movements of bison on the landscape would not be managed or controlled" (p.97). We want to emphasize the importance of this point and encourage FWS to carry such language through to the Final CCP. True restoration and possible realization of benefits to other species would involve allowing bison to range freely within their allowed boundaries. The effect of bison grazing, wallowing, rubbing, and watering have well known positive effects on biodiversity. Such factors as herd/group size, family group tenure, carcass availability, sex ratio, and ability to move freely as much as possible are key to bison behavior and mitigation of possible negative impacts (Sanderson, et al., 2008).

3

are available to complete it without burdening the already scarce resources of the refuge.

12-6. (See response to comment 12-5, above). Although there is extensive literature on the benefits of bison to native grasslands and some shrublands, we are most concerned with wetlands, specifically short emergent (wet meadow) and riparian habitats. Although the greater Baca Refuge and Great Sand Dunes landscape (including TNC lands) is considered vast, riparian and short emergent habitats are only a small portion of the area. Limited research in this landscape (Schoenecker 2012) has shown that bison can spend a considerable amount of time in these habitats and can cause severe degradation. Our preferred alternative proposes additional, site-specific research to determine if bison can exist year-round on this landscape without damaging the habitats of other trust wildlife species. Carrying capacity isn't simply a measure of how many bison the landscape can support, but rather how many bison can be supported without damaging the habitat for other species.

The bison research area was selected based on habitat. It contains roughly the same type and proportion of habitats that occur in the greater FWS and NPS landscape (including the TNC land). We feel that having these proportions will allow us to gather valuable information on how bison use these habitats. This should give us good insights on how many bison (if any) can exist on the landscape in a healthy and compatible manner. After the research is complete, the boundary could be adjusted, but we would have far better data to support a decision on any future boundary.

12-7. As we referred to under 12-2 as well as in the language found in the draft and final CCP and EIS, we are actively engaged with NPS on the bison issue. Although we advocate for a collaborative approach with NPS, any future decision with respect to bison occurrence on Baca Refuge could be independent of any NPS decision. For

ELK MANAGEMENT FOR THE BACA NWR

1. We support FWS's inclusion of public hunting, monitoring, and collaborative management of elk (p. 99-100). Our past comments encouraged FWS to state its intent to plan collaboratively for elk management. Thank you for retaining such language in the CCP. We also support hunting in part because reduction of the elk herd could allow for an increase in the bison herd.

12-11

INVASIVE WEED CONTROL FOR ALL REFUGES

1. We support FWS's efforts in the Draft Proposed Action to control and reduce invasive weeds for uplands on all properties and for wetlands on the Baca Refuge. The CCP describes plans to "reduce the number and extent of invasive weeds" for uplands on all three refuges (p.81-82). We fully support this goal and also the specific objective of achieving less than 10-15% invasive weed cover in specific areas (p.80). We encourage FWS to also establish a weed goal for uplands as a whole, since the 10-15% goal pertains only to a few areas of 100+ acres. We also support that FWS would "prioritize addressing ongoing degradation and encroachment of invasive species in riparian areas" on the Baca Refuge (p.63).
2. **Modify the language about removing invasive species in uplands.** Table 8 describes the intent of treating invasive species "to benefit upland focal birds" (p.145). Focusing invasive species removal only on benefits to focal birds would be beneficial, but we recommend broadening the focus to benefit additional biological values. We recommend treating invasive species to improve habitat conditions for as many species as possible.
3. **Expand invasive weed treatments to other habitat types.** We did not see language about invasive weed treatments on any habitat types other than uplands for all three refuges, and on wetlands for the Baca Refuge. If such language does not already exist, we urge FWS to add language about invasive species treatments in the other habitat types – riparian, wetlands (for Alamosa and Monte Vista Refuges), and playas. We also encourage the identification of quantitative goals similar to what is included in uplands.
4. **Engage in coordinated interagency weed management.** Our 2012 comments recommended adding language to commit FWS's participation in and/or leadership of coordinated interagency weed management planning and implementation. This comment still stands. We did not see mention of a coordinated interagency weed management plan in the CCP, and would encourage FWS to add this to its plan.

12-12

example, we already manage bison herds on a number of national wildlife refuges as part of a metapopulation.

12-8. Refer to responses 12-5 and 12-6.

12-9. Refer to responses 12-5 and 12-6. We emphasize that the boundary area that we have shown under the preferred alternative is the boundary for the research area and not necessarily the boundary for potential future bison populations on the refuge. The research is to determine whether bison are compatible with refuge purposes.

12-10. We have carried forward the language on our definition of semi-free ranging in the final CCP and EIS.

12-11. Thank you for your comment.

12-12. We have included a strategy for weed management under each of our habitat types in the final CCP and EIS. Our objectives for uplands throughout the refuge complex and wetlands on Baca Refuge are more robust because those areas are where our weed problems are the most severe. We have identified the need for an integrated pest (including weeds) management plan, which will be a step-down plan to the CCP and provide specific details.

12-13

12-13. Thank you for your comment.

MIGRATORY BIRD HABITAT ENHANCEMENT

1. We support the goals for restoring riparian areas on all refuges. We support FWS's inclusion of quantitative goals. For example, we support FWS's goal to restore or establish "a minimum of 50 acres of moderate to dense...willow and cottonwood riparian habitat..." on the Alamosa and Monte Vista Refuges (p.63). We also support its goal to "restore the reaches of riparian habitat along about 21 miles of the Crestone, Willow, Cottonwood, and Deadman Creek drainages that are considered to be in poor condition...." (p.63).

WATER MANAGEMENT ON THE BACA REFUGE THAT SEEKS PRIMARY TO RESTORE ECOSYSTEMS

1. We support the restoration of playas and wetlands "where short emergent wetlands occurred historically" (pp. 71 and 144). We especially support this restoration to benefit rare or imperiled species such as sandhill cranes and northern leopard frogs, consistent with existing water rights and agreements.
2. We support the actions and objectives for the Rio Grande sucker and chub such as improving spawning and feeding, working with CPW to set priorities, etc. (p.102). Ensure that Table 8 describes such intended actions.

ADDITIONAL COMMENTS

1. We support continuing the use of fire to achieve management objectives.
2. We support management of wilderness characteristics.

12-15

12-15. Thank you for your comments on the use of fire and management of wilderness characteristics.

12-14. Thank you for your comment. We have clarified this in table 8.

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November 3, 2014

Attn: Laurie Shannon
Planning Team Leader
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Denver, CO 80225-0486

RE: Draft Comprehensive Conservation Plan, San Luis Valley National Wildlife Refuge Complex: Alamosa, Baca and Monte Vista National Wildlife Refuges

13-1

Thanks for the opportunity to provide comments to this CCP and EIS for the San Luis Valley Wildlife Refuge Complex. We appreciate all the time and effort that has contributed to the drafting of this document. The SLV Ecosystem Council will provide concise comments due to limited resources.

We also appreciate that the USFWS named us as a partner in this draft document. We are sympathetic to the limited financial resources that have been made available to public land managers in recent years. It makes little economic sense, since it will be management plans like these that will steer the way towards finding the appropriate direction of landscape level climate change adaptability measures.

Even though it would appear that budget constraints will limit financial resources over the coming decade, I suspect that science and maintaining wild places for carbon sequestering and wildlife survival will take precedence. So hang in there, perhaps all is not lost.

These comments are intended to hopefully inspire and not criticize, because we know how dedicated you are regarding protection of our dwindling landscape.

13-2

Research, Science and Wilderness Review Goal
Alternate B- 13,800 acres along the southeastern boundary of the Baca Refuge be managed as a wilderness study area and be considered for eventual wilderness designation. SLVEC supports this Management designation and agrees it is an appropriate area for a wilderness study area. However, we still continue to have concerns regarding the privately owned mineral rights underneath the Baca Refuge.

In our previous comments, we emphasized our concerns regarding the vulnerability of these mineral rights and the stated goals of the Baca Refuge preferred alternative could be significantly altered if these mineral rights are developed.

There appears to be a pervasive attitude among the USFWS that the potential for mineral development is low. SLVEC believes this position is a gamble and opens up the possibility for long term, if not irrevocable resource and wildlife damage. Our research and baseline data collection has concluded that there is indeed potential for mineral development and we are disappointed that USFWS is not taking this development potential more seriously.

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13-1. Thank you for your comments.

13-2. Thank you for your comments supporting wilderness designation for Baca Refuge. With respect to mineral rights, the National Wildlife Refuge System (Refuge System) has over 560 refuges with a diverse variety of land ownerships in all 50 States. On many of the lands that we manage, we do not own the mineral estate, and on some refuges we only have secondary jurisdiction over the surface estate. Although mineral development or energy development on national wildlife refuges is not without its challenges, we still conserve healthy populations of fish, wildlife, and plants as part of a system of lands in accordance with the mission of the Refuge System.

In developing this CCP and EIS, we looked at the foreseeable activities related to mineral development, and we did not find any definitive information to address as an actionable objective (refer to chapter 4, section 4.2) or a cumulative effect (refer to chapter 3, section 3.9). As you said in your comments, there are a vast array of pressing resource needs and budget constraints both within the refuge complex and within the Service, so pursuing acquisition of the mineral rights was not a priority action for this CCP and EIS. Should an unforeseen opportunity arise where we could realistically acquire the mineral estate on Baca Refuge, we see no reason why it would be inconsistent with the stated goals or philosophy of this CCP. We do not view having a mitigation strategy for working with any future developers as crisis management, but we are trying to be realistic about what we can achieve over the next 15 years given the fiscal constraints we currently have.

Therefore, we continue to point out the importance regarding the purchase and retirement of the Mineral Rights beneath the Baca Refuge, National Park Service property and the Forest Service Baca Mountain Tract.

We are all aware of the historical precedence to mine in the Crestone/Baca area over a century ago. There is no reason to think that, just because Lexam, aka VG Gold, may not find the oil and gas reserves that they have proposed drilling for, that there may not be other precious minerals on the Baca Wildlife Refuge or adjacent public lands property that very possibly, in the future, could be in abundance and financially viable. There is also nothing stopping Lexam, aka VG Gold from selling these private mineral rights to another, more aggressive, foreign country or corporation, who prioritize the acquisition of precious metals throughout the world. We have made this point before in previous comments.

Lexam, aka VG Gold has claimed to be a willing seller and work with the federal government. An opportunity is still at hand, with the cooperation of adjacent public land agencies, for the purchase and retirement of the mineral rights. The US Fish and Wildlife Service needs to play a critical role in seeing these negotiations move forward. The Baca Refuge is at a fortuitous jurisdictional nexus, not just in terms of protecting it's own lands from oil and gas or mineral extraction, but adjacent public lands as well.

As long as the minerals are privately owned, the financial whims of the mining and drilling will continue to pose an environmental threat to lands, water and wildlife within the SLV. We are disappointed that a purchase option was not analyzed in the CCP.

The draft states "On the Baca Refuge we would work extensively with owners and developers of third-party-owned mineral rights to find ways to reduce the effects of future exploration activities on visitors and wildlife and to locate exploration and production facilities away from visitors."

SLVEC sees this as crisis-management thinking and business as usual. It is not a solution but a stated mitigation measure. If the USFWS is serious about minimizing climate change activity, then it has to develop pro-active approaches to reduce the potential of oil, gas and mineral development.

SLVEC supports aspects of Alternative C—Habitat Restoration and Ecological Processes

We support the restoration and functioning of riparian areas and playas on the Baca Refuge. We support the application of natural disturbance regimes such as prescribed grazing and fire in other habitats. We support the improvement of habitat for all native species, but particularly threatened and endangered species and other species of concern.

We support the protection and restoration of riparian areas for southwestern willow flycatcher along the Rio Grande on the Alamosa Refuge and reintroducing the Rio Grande chub and Rio Grande sucker to the creeks on the Baca Refuge where they historically occurred.

We support the periodic use bison on the Baca Refuge to mimic the ecological services they may have once provided.

We support on-site interpretation and environmental education programs on the Alamosa and Monte Vista Refuges as funding allows, and that key messages would relate to restoration efforts.

We support the evaluation of the Lexam road and other gravel roads on the Baca Refuge that are not needed or are fragmenting habitat and advocate for their removal if that is deemed necessary.

We support Riparian habitat objectives which seem to be carried throughout all the alternatives. We support invasive species management, especially using fire as a tool.

We support the water management regimes and objectives for wetlands included in alternative C for all three Refuges.

We support the Playa wetlands objectives in Alternative C.

We support Uplands objectives in alternative C.

13-3

13-3. Thank you for your thoughtful look at the various elements of the alternatives.

We support Alternative B when it comes to Sandhill Crane Strategy, that has to be studied and changes need to happen slowly. Cranes may very well be able to adapt to Alternative C, but observation and monitoring will be necessary to reach that conclusion.

We support Bison Management outlined in Alternative B, because we believe they will have a positive ecological impact on the landscape (Please see Defenders of Wildlife comments). We support Elk Management objectives in Alternative C. We support objectives for hunting found in Alternative C.

Perhaps it has been overlooked by us, but SLVEC has not seen much information on mule deer or antelope populations within this document. The presenter for the elk and bison study in 2011 was asked about these populations and the response seemed to be that the populations were so small that their impacts were insignificant, that at least was what is interpreted. Obviously, the management of these populations needs to be included in the final document.

We know that writing about predators is a moot point at this juncture, the section about Wolves was particularly interesting in this EIS document, so we are compelled to provide a section that was recently submitted by SLVEC to the Great Sand Dunes National Park Service regarding their Ungulate Study. It is included below.

The World Wildlife Fund (WWF) announced in early October that there is now only half the mammal population left on earth since baseline estimations were recorded in the 1970's. Most of this mammal hunting, harvesting and loss of habitat have occurred in our oceans, but it serves as a great indicator regarding the current dilemma of habitat loss directed at these precious species.

We encourage the collaborative partnership between NPS with US Fish and Wildlife Service and continuing to work closely with their National Wildlife Refuge Bison reintroduction study to determine the sharing of a publicly owned wild Bison herd on adjacent Department of Interior properties.

Elk Management will be a key component of this Bison reintroduction effort and SLVEC initially supports the management tool options introduced in the NPS newsletter. We understand that NPS does not intend to carry forward predator introduction and we have a general understanding of the reasons why.

However, we are compelled to say that humans cannot possibly replace other predators, like Wolves, because carnivore's of this nature carry an entire ecosystem with them regarding their interaction with other species on the landscape. The desired future habitat conditions that NPS will be identifying, highlighting and detailing in the DEIS, will most likely contain conditions that only predators like Wolves, reintroduced onto the landscape, would be able to create and perpetuate.

It is unfortunate that we are not culturally ready to fully understand the benefits received by the reintroduction of Wolves into the Sangres and surrounding landscape. SLVEC believes reintroduction has the biological potential to bring health, vitality and some semblance of ecological balance back into this planning area. Perhaps by the time the next NPS Management Plan comes around, cultural barriers and tension will be eased and the reintroduction of a predator as significant as the Wolf will have the potential to become a reality.

Just looking at this reintroduction of Predator from an economic perspective, we are now choosing instead to bring in sharpshooters on a "seasonal" basis, who will have to be paid, when we could have a mammal predator on the landscape working to bring balance 24/7. It's not just that wolves don't receive paychecks or pension, but their impact on the movement of herds, grasses and other flora, cannot be replicated by humans.

The decision not to study the reintroduction of wolves and replace them with sharpshooters, is financially luxurious and only in a place like the United States, with it's complex, super imposing human infrastructure, could we get away with it, for now. (find of comments to NPS).

We know that the USFWS will continue to work closely with adjacent public land Managers, local communities, non-profits, tribes, state agencies, businesses and various experts, to develop key

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13-4. Thank you for your comments on predators. Mule deer are found on all three refuges in the refuge complex, and pronghorn are occasionally found on Baca and Monte Vista Refuges (refer to chapter 4, section 4.3, Other Wildlife Species). The State of Colorado has the responsibility for setting population objectives and managing resident wildlife populations like mule deer and pronghorn. We cooperate closely with CPW to help them achieve their objectives for ungulates. When we develop a CCP for a national wildlife refuge, we do not identify objectives for every species found on a refuge, nor are we studying these species other than making general observations. Instead, the objectives we have developed to improve the health and diversity of our riparian and upland habitats for migratory birds within the refuge complex should also benefit other wildlife species such as mule deer and pronghorn.

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RESPONSE

13-5

partnerships that will enhance this management plan to protect ecological principals and practices that will be appreciated and stewarded to future generations. We look forward to supporting this effort and the natural world it perpetuates.

Thanks for compiling such an interesting document and SLVEC will continue to study it's ramifications.

Sincerely,



Christine Canally, Director

13-5. Thank you for your thoughtful comments. We look forward to ongoing collaboration with you as we implement the objectives in the final CCP.

10/29/2014

DEPARTMENT OF THE INTERIOR, MIB - SLV comments

SLVRefugePlanning, FWG <slvrefugeplanning@fws.gov>

Wed, Oct 29, 2014 at 10:49 AM

SLV comments

Keith Aune <kaune@wcs.org>
To: SLVrefugeplanning@fws.gov

Person or persons recording SLV/CCP comments:

In North America, many wide-ranging mammals have experienced significant declines within the last 200 years. This loss of bears, cougars, wolves, elk, moose, pronghorn, and bison has resulted in fewer landscapes rich with large mammals and lower densities of mammals in many other landscapes. Nowhere is this more dramatic than in the case of North American bison, which experienced an ecological loss at a scale unparalleled in our modern history. Only 200 years ago, 30-50 million plains bison (*Bison bison bison*) roamed the grasslands and shrub steppes from Mexico to central Canada. To the north, wood bison (*B. b. athabascana*) ranged from boreal forest to the Arctic plain. In herds that numbered up to ten thousand animals, bison were an ecological keystone species on the Great Plains; northern boreal forest and montane grasslands. Their migrations, grazing patterns, and behavior shaped the physical environment as well as their myriad ecological interactions with other native species. Bison were integrally linked with the spiritual and economic lives of Native American cultures, and embodied the frontier for many Americans. Massively overhunting and land-use change pushed bison to the brink of extinction, and by the 1870s bison had been decimated. By 1889, only about 1,000 bison were left.

Today bison remains a unique icon of North American culture and natural history. The numerical restoration of bison, which now number approximately 451,000, could be considered a conservation success story. However, the bison's important ecological roles in these landscapes have not been restored in concert with their numerical restoration, as over 95% of these animals are being raised for meat in confined and managed circumstances. Today, bison exist in vastly differing management circumstances, herd dynamics, states of genetic integrity, and ecological settings than in the past. Bison are absent from most of their former range; their grazing does not influence the grassland fire or nutrient cycling regimes, and they rarely create habitat (or provide food) for other native species.

In order to restore the ecological role of bison across their original range, the Wildlife Conservation Society (WCS), an international science-based organization committed to conserving wildlife and wildlands, has set up a multi-stakeholder, transboundary initiative. This decision is rooted in WCS' long history with bison: William Hornaday, WCS' first director, conducted the 1889 survey that revealed how alarmingly close bison were to extinction. He, Theodore Roosevelt, and others formed the American Bison Society (ABS) in 1908. The ABS launched a national campaign to create wild bison reserves, stock them with bison from WCS' Bronx Zoo and elsewhere, and educate the public about the bison's endangered status. The ABS helped resubmit bison by securing individuals from captive and private herds, raising funds, and lobbying for reserve establishment. In 1907, WCS shipped 15 bison to the Wichita Reserve Bison Refuge in Oklahoma by cart and mule. In 1910, the ABS helped buy the nucleus herd for the National Bison Reserve.

In 2005, on the 100th anniversary of the ABS, WCS assessed the state of bison conservation and realized that there was a need for an umbrella group to work with the community of bison experts and managers in a second phase of the original ABS mission. As a result, on its 100th anniversary, WCS revitalized the American Bison Society with the objective of working with partners to achieve ecological restoration of both wood and plains bison across North America. In May 2007 WCS published a multi-stakeholder report detailing the goal of ecological restoration and how it might be achieved (Redford and Feam 2007). Without a concerted effort to accomplish large scale ecological restoration in places like the San Luis Valley Complex, we may alter the natural evolutionary path for bison and lose the species to domestication and small population genetic effects.

Efforts to ecologically restore American bison are badly needed as the future of wild bison is not yet secure. Recently, COSEWIC evaluated the status of plains bison and found them to be threatened in Canada. Opportunities to enable bison to function as an ecological force are rare. Most plains bison herds in North America (75%) are isolated and

1/2

<https://mail.google.com/mail/u/0/?ui=2&ik=303542416&ikview=rf&search=ib&oeqmg=14955407/da14b454&ui=14955407/da14b454>

14-2. We are actively engaged with NPS, CPW, TNC, and other partners, and we will continue to be engaged in collaborative, cross-boundary, and landscape-level management on ungulate issues. Since late 2010, the NPS has been a cooperating agency in our planning process. Although the NPS process is on a different timeline than our CCP process, we have been a cooperating agency in the NPS's ungulate management planning process. However, differences in agency policies, mandates, timelines, management philosophies, and landscape objectives often mean that we can't use the same management techniques in the interface areas. On national wildlife refuges, we generally don't manage for specific species on our lands, trending more toward management of overall habitat health as it relates to various trust species that occur or should occur in those habitats. This usually means managing for a variety of successional stages of most habitat types occurring on the refuges. Occasionally, as is the case with elk, we must engage in single-species management because the species is damaging or otherwise affecting our ability to maintain and sustain varied habitats and species components. Single-species management is usually expensive and time consuming.

The draft and final CCP and EIS do not provide for a full bison conservation alternative consistent with the DOI Bison Conservation Initiative of 2008, nor was it our intent to do so during the CCP planning process. In a report describing DOI's bison conservation and future planning efforts (DOI Bison report 2014), DOI asked us and the NPS to determine the suitability of Baca Refuge and Great Sand Dunes National Park and Preserve lands to play a role in overall DOI bison conservation efforts. Under our alternative B, which is our preferred alternative, we have proposed to research the potential of bison conservation occurring on the Baca Refuge without damaging the habitats for other wildlife. We have identified a specific research area that has roughly the same habitat

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in populations less than 400. We encourage the USFWS to explore opportunities to build a cooperative bison restoration program with NPS and TNC partners in the San Luis Valley. We also encourage inviting the suitable tribal partners in the region to consult and engage the decision process. The need for large places where more than 1000 bison can roam to enrich and inspire human cultures is very important to the ecological future of this species.

We realize that conserving one of North America's most iconic species, the bison, has become a broader and more complex endeavor than it was a century ago when Hornaday and Roosevelt supported the American Bison Society's pivotal demographic rescue of the species - what could be called the First Bison Restoration. The Second Restoration - establishing ecologically functioning bison populations, may require another century. The ecological restoration of American Bison will certainly require collaboration among a broad range of partners, including government agencies, NGOs, universities, producer groups, and Native American groups. Despite this challenge WCS believes that bison belong on our continent forever, moving in large herds and interacting significantly with grassland ecosystems, while inspiring and sustaining human cultures. We urge the USFWS to consider a full bison conservation alternative in your land use plan that explores a large scale cooperative venture with Great Sand Dunes National Park, TNC and seven neighboring private ranches that are willing partners. Enabling bison to fulfill their ecological role across large scale multi-jurisdictional landscapes is a rare opportunity in North America and we hope the Department of Interior will advance such initiatives when opportunities arise.

Redford, K. H., K. Aune, and E. Fearn. 2009. The second recovery of bison: Ecological recovery of North America's largest mammal. *The Wildlife Professional*, Vol 3: 48-50.

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LETTER 14—Wildlife Conservation Society

RESPONSE

type percentages as the overall FWS and NPS landscape. Because of potential difficulties of using Service-owned bison, we propose to utilize private or non-Service-owned bison to conduct the research. If our research shows that attempting bison conservation on refuge lands are not compatible with the purposes of the refuge, the bison can easily be removed from the landscape without affecting other bison conservation efforts. We realize that this research would be expensive, but remain committed to ensuring that it occurs only if and when adequate resources are available to complete it without burdening the already scarce resources of the refuge. If we move forward with bison conservation on Baca Refuge, there could be adjustments to the boundary, but additional compliance under NEPA may be necessary.

We also evaluated several other options for bison conservation or occurrence on the refuge).

Responses to Individual Comments

This section includes general responses to individual comments, listed by the comment number in the following table. As shown in the table, we tracked the number of individuals who submitted each type of comment and responded to the substantive comments as well as some nonsubstantive comments that reflected strong public interest. While we acknowledged many comments expressing particular sentiments or concerns, many of those that were considered nonsubstantive are not addressed in the responses.

How To Find Responses to Individual Comments

- Comments are organized by topic in the following table. Each comment has a corresponding comment code number.

- Comment code numbers identified with bold text and an asterisk (“*”) indicate that the comments are considered to be substantive and/or received a response.
- Look up the comment code number for the comment of interest to find the comment and our response.

Individual Comments by Issue

All of the comment codes and the number of individual responses that correspond to each comment code are shown in the following table. Comments that received a response are indicated with **bold** text and an “*” and are responded to in the following pages. The number of comments received does not include form letters, which are addressed below under Summary of Form Letters. The comment code numbers are not sequential because some of our comment codes were not used and are therefore not shown in the table.

<i>Comment Code</i>	<i>Comment/Issue Description</i>	<i>Number of Comments</i>	<i>Percentage</i>
Purpose and Need			
National and Regional Mandates and Plans			
1101	Comment about conformance with existing policies, mandates, or plans	3	8%
1103*	Comment that the refuges should be managed for wildlife and are not intended for hunting	4	11%
Scope of the Analysis/Issues Not Addressed			
1201*	Comment that the geographical scope of the analysis is too narrow	1	3%
1202	General comment about the Closed Basin Project	1	3%
1211*	Comment that the CCP should address collaborative water management in partnership with neighboring communities	5	13%
1212	General comment about water rights and water use off the refuges	1	3%
Refuge History and Vision			
2001	General comment about refuge complex vision and goals	2	5%
Alternatives			
3001*	Specific substantive comment about alternatives	6	16%
3002	General comment about alternatives	3	8%
Alternative A – No Action			
3011	Comment in support of the No-Action Alternative	0	0%
3012	Comment opposed to the No-Action Alternative	0	0%
3013	Comment in support of the No-Action Alternative, with modifications	1	3%

<i>Comment Code</i>	<i>Comment/Issue Description</i>	<i>Number of Comments</i>	<i>Percentage</i>
Alternative B – Wildlife and Public Use Emphasis			
3021	Comment in support of Alternative B	8	21%
3022	Comment opposed to Alternative B	0	0%
3023	Comment in support of Alternative B, with modifications	3	8%
Alternative C – Ecological Processes Emphasis			
3031	Comment in support of Alternative C	1	3%
3032	Comment opposed to Alternative C	1	3%
3033	Comment in support of Alternative C, with modifications	2	5%
Alternative D – Public Use Emphasis			
3041	Comment in support of Alternative D	3	8%
3042	Comment opposed to Alternative D	0	0%
3043	Comment in support of Alternative D, with modifications	2	5%
Alternative Objective Preferences			
3051	Comment preferring the education objectives in Alternative C	1	3%
3052	Comment preferring the elk management objectives in Alternative D	1	3%
3053	Comment preferring the water management objectives in Alternative B	2	5%
3054	Comment preferring the wildlife observation, photography, and interpretation objectives in Alternative B	1	3%
3055	Comment preferring the water and habitat management objectives in Alternative C	1	3%
Habitat Management Objectives			
3101*	Specific substantive comment about habitat management	1	3%
3102	General comment about habitat management	2	5%
3111*	Specific substantive comment about wildfire management	1	3%
3112	Comment supporting the use of fire (prescribed or otherwise) as a management tool	1	3%
3121	Comment that the current noxious weed management approaches are insufficient	1	3%
Wildlife Management Objectives			
3201	General comment about wildlife management	2	5%
3211	General comment about elk management	2	5%
3212*	Specific substantive comment about elk management	3	8%
3213	Comment supporting proposed elk management objectives	4	11%
3214	Comment supporting efforts to reduce and redistribute the elk herd	1	3%
3215	Comment supporting nonlethal methods to manage elk and reduce browsing pressure	2	5%
3217*	Comment about disease in elk herd being a concern	1	3%
3218*	Comment that USFWS has not tried all available nonlethal management tools	1	3%
3221*	Specific substantive comment about sandhill crane management	2	5%
3222	Comment supporting continued agricultural grain production on the refuge	3	8%
3231*	Specific substantive comment about bison reintroduction	7	18%
3232	General comment about bison reintroduction	2	5%
3233*	Comment supporting bison reintroduction on the refuge	5	13%

<i>Comment Code</i>	<i>Comment/Issue Description</i>	<i>Number of Comments</i>	<i>Percentage</i>
3234	Comment opposed to bison reintroduction on the refuge	6	16%
3235	Suggestion to move bison closer to visitors	2	5%
3236*	Comment that sufficient funding is not available to manage a year-round bison herd	3	8%
3237	Comment opposed to a small demonstration herd	2	5%
3238	Comment supporting free-ranging bison in the refuge	2	5%
3239*	Comment that bison reintroduction should not occur until the elk population has been reduced	3	8%
Water Management Objectives			
3301	Comment in support of improving/enhancing water resources management	2	5%
3302*	Specific substantive comment about water resources management	1	3%
3303	General comment about water resources management	1	3%
Visitor Services Objectives			
3401	General comment about visitor use/services	2	5%
3402*	Specific substantive comment about visitor use/services	3	8%
3403	Comment supporting enhanced visitor use/services	2	5%
3411*	Specific substantive comment about hunting management/opportunities	9	24%
3412	General comment about hunting management/opportunities	3	8%
3413*	Comment opposed to hunting on the refuges	7	18%
3414	Comment supporting hunting on the refuges	5	13%
3415*	Comment opposing hunting on Baca Refuge	2	5%
3416	Comment supporting hunting as a secondary tool for the purpose of controlling herds	1	3%
3417*	Comment suggesting a 5-year moratorium on hunting	4	11%
3418	Comment that sufficient hunting opportunities exist off of the refuge	3	8%
3419*	Comment opposing limited small game hunting on Baca Refuge	3	8%
3421*	Comment opposed to fishing on the refuge	2	5%
3431*	Specific substantive comment about access management	11	29%
3432	General comment about access management	2	5%
3433	Comment supporting walking, biking, and/or horse access on Baca Refuge	2	5%
3434	Comment supporting year round walking and wildlife viewing opportunities	2	5%
3435	Comment opposing access to the refuge off of Highway 17	1	3%
3436	Comment supporting auto tour route in Baca Refuge	2	5%
3437	Comment opposing auto tour route in Baca Refuge	1	3%
3438	Comment supporting enhanced biking opportunities on the refuge	1	3%
3439	Comment opposing bicycle access on the refuge	2	5%
3441*	Comment that the Service should provide access for nonconsumptive recreation, including art forms beyond photography	2	5%
3442	General comment about viewing areas	1	3%
3443	Comment supporting enhanced opportunities for wildlife observation	1	3%
3444	Comment supporting interpretive materials in Spanish	1	3%
3451*	Specific substantive comment about environmental education and outreach	2	5%

<i>Comment Code</i>	<i>Comment/Issue Description</i>	<i>Number of Comments</i>	<i>Percentage</i>
3452	General comment about environmental education and outreach	1	3%
3453	Comment supporting enhanced public education programming	3	8%
3454	Comment supporting partnership with local community in education programming	1	3%
Refuge Operations and Partnerships Objectives			
3501*	Specific substantive comment about refuge operations and partnerships	1	3%
3502	General comment about refuge operations and partnerships	4	11%
3511	Comment supporting partnership with other agencies in refuge operations	3	8%
3512	Comment supporting partnership with local communities and organizations in refuge management	2	5%
3513*	Comment that USFWS should partner with NPS on a joint bison management plan	4	11%
3521	Comment opposing new visitor center and facilities on Baca Refuge	3	8%
3522	Comment supporting new visitor center and facilities on Baca Refuge	2	5%
3523	General comment regarding budget, funding, and/or resource allocation	4	11%
3524*	Comment that Baca Refuge should be managed separately with unique objectives	2	5%
3525*	Comment that the refuge should be closed at night	3	8%
3526	Comment supporting funding for the refuge and CCP	3	8%
Cultural Resource Objectives			
3601	Comment that the refuges need an archeological/cultural center to preserve and display cultural resources	3	8%
3602	Comment that an archeological/cultural resource survey needs to be completed before any actions are taken	3	8%
Research, Science, and Wilderness Objectives			
3701	Comment supporting wilderness designation	3	8%
Elements Considered but Eliminated from Further Consideration			
3902	Comment that natural predators should be used as a management tool	2	5%
3905*	Comment that fertility control should be considered to manage elk	3	8%
Affected Environment and Environmental Consequences			
Physical Environment			
4111	Comment that natural resources in the San Luis Valley will be adversely affected by climate change	2	5%
4121	Comment about visual resources and night skies	1	3%
4131*	Comment about the effects of proposed actions on soundscapes	5	13%
Biological Resources			
4201*	Specific substantive comment about the effects of proposed actions on biological resources	1	3%
4202*	Comment that effects to pronghorn should be analyzed	2	5%
4203	Comment about threatened and endangered species	1	3%
4211	Comment that proposed actions would result in the spread of invasive species	1	3%
4221	Comment that the large elk herd is adversely affecting refuge resources	2	5%
4231	General comment about bison	1	3%
4232*	Specific substantive comment about bison reintroduction	1	3%

<i>Comment Code</i>	<i>Comment/Issue Description</i>	<i>Number of Comments</i>	<i>Percentage</i>
4233*	Comment about the effects of bison reintroduction on natural resources	9	24%
4234	Comment that bison would result in damage to cultural resources	2	5%
4236	Comment about the historical presence of bison in San Luis Valley	2	5%
4237	Comment that bison reintroduction would benefit the land	1	3%
4241	Comment about the effects of proposed actions on sandhill cranes	1	3%
4242	General comment about waterfowl	1	3%
Visitor Services			
4301*	Specific substantive comment about visitor use/services	2	5%
4302*	Comment about the potential conflicts between hunting and nonconsumptive visitors	5	13%
4303	Comment that hunting will increase elk/car collisions	1	3%
4311*	Comment that the analysis of impacts of hunting is inadequate	1	3%
4312*	Comment about visitor safety and risks posed by hunting	4	11%
4325	Comment about viewing areas	1	3%
4326	Comment supporting limited access at Baca Refuge to improve habitat security for wildlife	2	5%
4327	Comment opposing increased visitor access at Baca Refuge	3	8%
4328	Comment supporting access to refuge off of Highway 17	1	3%
4329	Comment that the proposed seasonal road should remain a 2-track road for nonmotorized use	2	5%
Socioeconomics			
4501*	Specific substantive comment about socioeconomics	2	3%
4511*	Specific substantive comment about the effects of proposed actions on the local economy	3	8%
4513	Comment that the Monte Vista Crane Festival generates tourism and supports the local economy	2	5%
4514	Comment about the value of visitor access to the local economy	4	11%
4515*	Comment that recreational hunting is in conflict with the values of local residents and the spiritual communities that are central to the local economy	2	5%
4516*	Comment that the values of the local residents and spiritual communities are not mentioned in the plan/EIS	3	8%
Refuge Operations and Partnerships			
4602*	Comment that the plan does not consider the effects (e.g. noise, privacy) of proposed actions on adjacent property owners	8	21%
NEPA Process			
Public Involvement Process			
5101*	Comment that the public involvement process has been inadequate	3	8%
Draft CCP/EIS			
5201*	Specific substantive comment about the draft CCP/EIS document	2	5%
5202	General comment about draft CCP/EIS document	1	3%
5203*	Comment that the analysis in the draft CCP/EIS is inadequate	1	3%
5204*	Specific suggested addition to the CCP/EIS document/analysis	1	3%
5205	Comment complimenting the draft CCP/EIS	7	18%
5206*	Comment that the draft CCP/EIS ignores current scientific research	1	3%

<i>Comment Code</i>	<i>Comment/Issue Description</i>	<i>Number of Comments</i>	<i>Percentage</i>
Other			
6001	Comment encouraging sound science in all decision-making	1	3%
6002	Comment that nonconsumptive visitors constitute the majority of visitors at the refuge	1	3%

Most Common Concerns or Issues

The 10 most common concerns or issues expressed in the individual comments (not including form letters) were:

1. Comment about access management (comment code 3431)
2. Comment about hunting management opportunities (comment code 3411)
3. Comment about the effects of bison reintroduction on natural resources (comment code 4233)
4. Comment in support of Alternative B (comment code 3201)
5. Comment that the plan does not consider the effects (e.g., noise, privacy) of proposed actions on adjacent property owners (comment code 4602)
6. Comment about bison reintroduction (comment code 3231)
7. Comment complimenting the draft CCP and EIS (comment code 5205)
8. Comment opposed to hunting on the refuges (comment code 3413)
9. Comment about alternatives (comment code 3001)
10. Comment opposed to bison reintroduction on the refuge (comment code 3234)

Summary of Form Letters

We received mass correspondence (petitions or form letters) commenting on the draft environmental impact statement originating from two sources:

1. Defenders of Wildlife
2. Wild Earth Guardians

The amount of mass correspondence received from each of the two sources and the comments contained in each are described below. Comments that were added to the standard form letter text were

recorded as individual comments. Comments contained in this correspondence that received a response (indicated with **bold** text and an “*”) are described and responded to below under Responses to Individual Comments. As mentioned earlier, some of the comments responded to below do not meet the definition of “substantive” (as defined above). However, we have chosen to respond to specific nonsubstantive comments when the public displayed a strong interest.

Defenders of Wildlife

The Service received 940 copies of a form letter with the following comments:

- Comment in support of Alternative B (comment code 3021)
- Comment supporting bison reintroduction on the refuge (comment code 3233)
- Comment opposed to a small demonstration herd (comment code 3237)
- Comment supporting free-ranging bison in the refuge (comment code 3238)
- Comment supporting partnership with other agencies in refuge operations (comment code 3511)
- Comment that USFWS should partner with NPS on a joint bison management plan (comment code 3513)

Wild Earth Guardians

We received 26 copies of a form letter with the following comments:

- Comment about conformance with existing policies, mandates, or plans (comment code 1101)
- Comment that the refuges should be managed for wildlife and are not intended for hunting (comment code 1103)
- General comment about the alternatives (comment code 3002)

- Comment opposed to Alternative B (comment code 3022)
- Comment opposing proposed elk management objectives (comment code 3216)
- Comment opposing hunting on Baca Refuge (comment code 3415)
- Comment that sufficient hunting opportunities exist off of the refuge (comment code 3418)
- Comment that natural predators should be used as a management tool (comment code 3801)
- Comment that fertility control should be considered to manage elk (comment code 3802)
- Comment about the potential conflicts between hunting and nonconsumptive visitors (comment code 4302)
- Comment about visitor safety and risks posed by hunting (comment code 4312)

Responses to Individual Comments

1000 – Purpose and Need

COMMENT 1103. Comment that the refuges should be managed for wildlife and are not intended for hunting (Comments in opposition to hunting on refuges)

Response 1103. The Improvement Act of 1997 (Improvement Act) established hunting as a priority public use if it is compatible with refuge purposes. We believe that a high-quality, managed hunting program is an important and compatible public use on the refuges. We also believe that there are benefits of using public hunting as a habitat management tool as well as benefits from providing for quality wildlife-dependent recreation, which has deep cultural roots in the San Luis Valley.

COMMENT 1201. Comment that the geographical scope of the analysis is too narrow (Comments regarding the analysis of impacts on migratory birds)

Response 1201. As described in Chapter 1 and shown on Figure 6, the decision area for the CCP and EIS is within the designated boundaries of the national wildlife refuges; however, the analysis

area for impacts included all of the upper Rio Grande watershed. We believe that this is an appropriate and sufficient analysis area for this plan.

COMMENT 1211. Comment that the CCP should address collaborative water management in partnership with neighboring communities (Comments related to water availability and management in the Crestone area)

Response 1211. Throughout the CCP process, we met with neighboring communities to provide information about how the water systems upstream of Baca Refuge affect our management of the refuge, our water rights, and the use of water to meet the legislative purposes of the refuge complex within the restrictions dictated by the legal decrees, authorizing legislation, and existing leases (refer to chapter 1, section 1.8, Issues Not Addressed in the CCP and EIS). We understand that many members of the community desire that we outline a holistic and whole watershed approach to solving water use and water rights issues upstream of the Baca Refuge in our CCP and EIS, but these are legal issues that cannot be solved within the scope of this planning process.

3000 – Alternatives

COMMENT 3001. Specific substantive comment about alternatives (specific text)

Comment 3001a. *What I'm having trouble with is the alternatives themselves - they are so black and white and therefore limiting. I just don't understand why the conservation vision for this landscape can't do many of the things that are listed in multiple alternatives. Why does it have to be strictly "habitat restoration and ecological processes" focused, or strictly "Maximize public use". There is room for both and ultimately you would have buy-in from many more constituencies if there was something of everything...And I think there is room for all of it on this large landscape.*

Response 3001a. Thank you for your comments. We disagree that the themes are limiting. The alternatives were intentionally packaged into different themes to be able to draw out the distinctions between various refuge management options and their effects. We based our themes on the direction that is outlined under the Improvement Act for how we are to manage national wildlife refuges. Unlike other Federal land management agencies, we have a singular mission (wildlife conservation), but we are to provide opportunities

for compatible wildlife-dependent public uses where possible. Based on the comments received and our final review, the FEIS does include some elements from different alternatives that are most appropriate or beneficial for the refuges.

Comment 3001b. *All three proposed alternatives include “small game hunting” in the same areas, with the same facilities and in the same ways. The draft plan does not include any alternative that does not contain small game hunting, nor any significant variation in approach or detail.*

Response 3001b. See the response to comment 3419. Currently, limited small game hunting is permitted on Alamosa and Monte Vista refuges. Under alternative A for Baca Refuge, the refuge would remain closed to public use and would not include limited small game hunting.

Comment 3001c. *I support Alternative B, if I had to choose, but I think you should also encourage education programs similar to what is suggested in Alternative C, and you should also make elk available for public use (for harvest) as suggested in Alternative D, but not all species should be hunted.*

Response 3001c. Thank you for your comments.

Comment 3001d. *I think there needs to be more input and a little deeper thinking on the actual alternatives. I don’t think they cover an appropriate range of conservation possibilities, and they don’t support the directive from our Leadership in DOI for the Bison Conservation Initiative in developing a contiguous herd with NPS, which needs to be included in alternatives.*

Response 3001d. See the response to comment 3233.

Comment 3001e. *The Service has yet to propose the best alternative for the refuge complex. FWS should manage Monte Vista in accordance with Alternative D, Alamosa Refuge in accordance with Alternative B, and Baca Refuge in accordance with Alternative C. This would allow for the best balance of human and ecological needs.*

Response 3001e. Thank you for your comments.

Comment 3001f. *I think the “themes” of the Alternatives are limiting. What was the basis for these “themes”? Why wouldn’t you want to encourage public education programs in all of the alternatives? For example, there is a very strong voice in the public that is pro wilderness and would like to see protection and less development (no motorized vehicles, no more roads). There is public support (and directives from our Leadership in DOI) to support the Bison Conservation Initiative, and*

seriously work toward a conservation population on this landscape. There is a need to work with CPW on elk management and protect browsed woody species on the Baca NWR. There is public interest in education programs. I support all of these but they were each under different “themes”. They all make sense from a biological standpoint for this landscape, and can all be achieved. It seems very “all or nothing” to limit management to either have “increased human activity” or “don’t touch the landscape wilderness approach.”

Response 3001f. Thank you for your comments. The alternatives were intentionally packaged into different themes to be able to draw out the distinctions between various refuge management objectives and their effects.

COMMENT 3101. Specific substantive comment about habitat management (specific text)

Comment 3101. *The draft plan fails to present any alternative approaches to protect and restore crucial riparian habitat. Refuge staff have fenced sensitive riparian areas, and volunteers have planted trees and plants along creeks...All science-based analysis, as well as the needs of local residents, point to the strategy of continuing to fence and replant, and allow for a long-term recovery of the riparian areas.*

Response 3101. The CCP includes multiple strategies to protect and restore riparian habitat. In addition to enclosure fencing and plantings (which are already used within our existing resource allocations), other strategies include elk dispersal and harvest, stream hydrology improvements to facilitate regeneration, wildland fire management, grazing management, and monitoring.

Comment 3111. Specific substantive comment about wildfire management (specific text)

Comment 3111. *I support using prescribed fires as a tool to control invasive species, as long as safety measures are funded and utilized. Neighbors who live downwind of the Refuge are at risk. Please continue to establish a 60-foot barrier along the border of the Refuge, as was used in 2014 during prescribed burns.*

Response 3111. Thank you for your input. We will continue to work with neighbors in planning and implementing prescribed fire.

Comment 3212. Specific substantive comment about elk management (specific text)

Comment 3212a. *The draft ignores current scientific research (conducted by U.S. government scien-*

tists and published by U.S. Department of Interior and U.S. Geological Service) which shows that reducing the size of the elk herd is “unlikely” to protect the riparian plants from elk browsing. Specifically, the draft states that “Additional hunting pressure in and around riparian areas would likely reduce elk browse on young willows and cottonwoods, improving chances for survival and recovery of riparian plant communities.” The research by leading scientists in the San Luis Valley shows the opposite: “Hot spots of elk overconcentration or overgrazing may exist. Such hot spots are due to the uneven distribution of elk across the landscape. If managers want to reduce grazing pressure on these habitats, using management options that re-distribute elk or protect sensitive vegetation would likely yield more positive results than focusing on a reduction of the overall numbers of elk. Relying on simple herd-size reductions may not relieve grazing or browsing pressure on sensitive or preferred habitats where elk concentrate. That is, if elk focus browsing pressure in the same areas and their density of use is consistently higher in these areas, reducing overall herd size may have little positive effect on these preferred communities. However, if herd reductions are severe enough, elk densities in preferred habitats would be reduced eventually, but it would be a non-linear response.”

Response 3212a. Currently, the amount and distribution of elk on Baca Refuge are having an adverse impact on the habitats of other native species that we are mandated to protect. We agree that elk herd reduction alone is not likely to reduce impacts to riparian habitats, which is why the CCP includes multiple management tools and strategies to protect riparian habitat and to facilitate habitat regeneration over the long term. Public hunting is one tool, but it is not the only tool we intend to use. One of the main purposes of a hunting program would be to redistribute elk on the landscape and make them available to hunters both on and off refuge lands. This would help to keep elk from having an adverse impact on other species of wildlife that rely on sensitive refuge habitats. In the FEIS, we have updated the references by including references that were published since the DEIS was first written; however, we also stand by the literature we cited in the DEIS as well as our own professional observations about riparian health, browsing pressure, and the characteristic bird species that we should be seeing in a healthy riparian system.

Comment 3212b. *The draft does not provide any evidence of local crop damage. There are more large*

farms near the southern end of the refuge, where hunting is not proposed.

Response 3212b. The objectives of the proposed elk hunting program on Baca Refuge are to use an important habitat management tool and also provide a wildlife-dependent recreational opportunity. Mitigating crop damage off of the refuge, which has been a demonstrated problem for neighboring landowners and the State, is not our primary objective. However, we also recognize the value of implementing management actions that are consistent with the State’s overall elk management objectives.

Comment 3212c. *The draft states that the local herd averages 1,000 elk (page 100). Government-sponsored scientific studies of the San Luis Valley indicate this is well within the carrying capacity of the land. We are not aware of any scientist who believes that the current elk population can’t continue to thrive in the Baca Refuge and surrounding public lands. The draft plan does not present any such scientific analysis.*

Response 3212c. While some studies have indicated that the total elk population is within the carrying capacity for forage availability, the current amount and distribution of elk on Baca Refuge are having an adverse impact on the habitats of other native species that we are mandated to protect, most notably riparian habitat, playa habitat, and the wet meadows. This is why the CCP includes multiple management tools and strategies to protect wildlife habitat and to facilitate habitat regeneration over the long term.

Comment 3217. Comment about disease in elk herd being a concern (Comments made with regards to the large size of the elk herd and the concern for disease crossing Refuge boundaries)

Response 3217. The CCP objectives (alternatives B, C, and D) include development of a comprehensive monitoring plan for chronic wasting disease in elk.

Comment 3218. Comment that USFWS has not tried all available nonlethal management tools (Comments made in opposition to elk hunting)

Response 3218. The CCP includes multiple management tools and strategies to protect riparian habitat and to facilitate habitat regeneration over the long term. Public hunting is one tool, but it is not the only tool. One of the main purposes of a hunting program would be to redistribute elk on the landscape by making more elk available to hunters on lands outside the refuge as well as on the refuge. This would help to keep elk from

adversely affecting sensitive habitats that other species of wildlife need.

Comment 3221. Specific substantive comment about sandhill crane management

Comment 3221a. *I urge the burying of hazards to sandhill cranes, such as telephone and power lines, which endanger them in their flight paths.*

Response 3221a. Thank you for your input.

Comment 3221b. *The Monte Vista and Alamosa Refuges are being managed very successfully currently. Their role in providing stopovers and feed for migratory birds is very important for the conservation of these bird species, especially in the wake of accelerating habitat loss in South and Central America as well as impacts from global climate change. The management of these refuges should not be modified in any substantial way - the role they play is becoming more and more important with habitat loss elsewhere. And it's working well. So why make any big changes to these two refuges if you are successful already?*

Response 3221b. We agree that the refuges have played, and continue to play, an important role in sandhill crane migration and conservation as well as the conservation of other migratory birds. This is particularly important in light of habitat losses elsewhere. We believe that the objective of producing a minimum of 190 acres of small grains for cranes will be sufficient to support sandhill cranes during their migration. All water users in the San Luis Valley (including us) will be required to comply with new State regulations for replacing stream depletions that negatively affect other senior surface water users. With the combination of less water available due to ongoing drought and climate change as well as tight fiscal budgets in the foreseeable future, we have to find ways to manage our water resources more efficiently.

Comment 3231. Specific substantive comment about bison reintroduction (specific text)

Comment 3231a. *Would bison be added to planned livestock numbers, which could compound impacts? What is the carrying capacity of the land based on soil surveys/ecological sites and plant communities, and how will potentially three different ungulate be managed in the same area?*

Response 3231a. Thank you for your comment. Bison would not be added to planned livestock numbers for a given area. We use livestock to accomplish a specific habitat objective. Under alternative D, we would not need to use livestock in the bison obser-

vation area. Under alternative B, we would design the research program to answer some of the questions you have raised.

Comment 3231b. *Develop a free ranging bison herd that has access to NPS, Medano, and Baca lands without fencing between these landscapes...fencing may be needed on the west side to prevent movement toward agriculture. The historical bison use in the Valley was not considered high density, so a herd does not have to be huge, but it should be genetically viable (>500) and it should be free roaming, and efforts should be made to potentially incorporate a bison hunt with CPW over the long term (eventually).*

Response 3231b. Thank you for your comment. See the response to comment 3233.

Comment 3231c. *I'm interested in the location of the bison fence line in alternative D. It seems to include a lot of sabkha habitat with a small amount of wetlands. This isn't consistent with what we know about bison habitat selection, and even the elk didn't select sabkha habitat on the Baca over the 3 years that we monitored their movements with radio collars (K. Schoenecker, USGS, unpubl. data).The proposed fence line may be just an experimental guess at this stage, but there is some science available to predict what areas bison would select on the Baca NWR. Can someone explain how the fence line was determined and what the carrying capacity would be inside that fence line? The number of bison that could be included within that enclosure (in Alternative D) seems very small.*

Response 3231c. See the response to comment 3233. The bison research area was chosen because it includes a full representation of all the habitat types currently found on the refuge and in Sand Dunes (including sabkha and wetlands). This will enable us to evaluate how bison use and affect those habitats.

Comment 3231d. *If bison were introduced on a periodic basis it would be optimal to have a rather small conservation herd (>100), given the soils, vegetation types, potential for long-term drought, and climate change.*

Response 3231d. See the response to comment 3233.

Comment 3231e. *I would support using bison for ecological restoration with grazing, but not for a showcase herd for educational purposes. It makes more sense to develop a semi-free ranging herd and still promote educational opportunities*

Response 3231e. Thank you for your comment. See the response to comment 3233.

Comment 3231f. *One of the clearest ways to connect the Baca NWR and Great Sand Dunes National Park landscape is under the direction and guidance of the Department of Interior Bison Conservation Initiative (Department of Interior 2014)... Why is the directive from DOI not being offered in one of the alternatives?*

Response 3231f. As described in Section 1.1 and 1.2 (DEIS on pages 2–5), the purpose for any national wildlife refuge may come from one or more authorities. Each national wildlife refuge shall be managed to fulfill the mission of the National Wildlife Refuge System as well as the specific purposes of the refuges. Many other policies such as the Biological Integrity, Diversity, and Environmental Health Policy (601FW3), and the Fenced Animal Management (701FW8) provide further direction for managing habitat and wildlife on national wildlife refuges. For Baca Refuge, the legislative purposes of the refuge (2009) do not mention bison conservation (DEIS, page 30). The 2014 DOI Bison Report was not a directive telling us to consider bison conservation. It was a report that summarized the DOI lands that currently support bison, identified lands where bison reintroduction could occur in the future, and identified places that might be suitable for placement of quarantined bison from Yellowstone National Park.

Comment 3231g. *Researching the ecological impacts of bison in the San Luis Valley would be beneficial, but the bison would have to be placed permanently (not periodically) in order for it to be a viable research project and to see the full effect on the environment.*

Response 3231g. Thank you for your comment. See the response to comment 3233. Any bison research project would consider the temporal scope and other factors.

Comment 3233. Comment supporting bison reintroduction on the refuge (Comments made in support of bison reintroduction, and/or making the case that the proposed objectives are insufficient for bison conservation)

Response 3233. American bison conservation continues to be a high priority for us and DOI. DOI continues to identify new lands within its ownership where bison conservation could potentially occur. The addition of Baca Refuge to the Refuge System appealed to DOI and other Service bison conservationists because of the large landscape and

because of its proximity to other large landscapes owned and managed by DOI agencies (DOI 2008, 2014). However, DOI recognizes that bison conservation is not a specific purpose of the refuge and that we have concerns about the adverse effects on habitats of other wildlife from other large ungulates such as elk that are already on Baca Refuge. DOI also recognizes that, in general, it is the Service's policy not to pursue additional captive, fenced bison herds. Bison management on a specific Refuge System unit occurs through the unit's CCP or other management plans authorized under the Improvement Act.

However, in a report describing DOI's bison conservation and future planning efforts (2014 DOI Bison report), DOI asked the Service and the NPS to determine the suitability of Baca Refuge and Great Sand Dunes National Park and Preserve (Sand Dunes) lands for overall DOI bison conservation efforts. Therefore, we have proposed to research the potential for bison occurrence on Baca Refuge to ensure that bison do not have an adverse impact on the habitats for other species. We have identified a specific research area that has roughly the same habitat-type breakdown as the overall FWS and NPS landscape. Because of potential difficulties of using Service-owned bison, we propose to utilize private or non-Service-owned bison to conduct the research. If our research shows that bison conservation on Baca Refuge is not compatible with the purposes of the refuge, the bison can easily be removed from the landscape without affecting ongoing Service-wide bison conservation efforts. We realize that this research will be extremely expensive to undertake, but remain committed to ensuring that it occurs only when adequate resources are available to complete it without burdening the already scarce resources of the refuge.

Comment 3236. Comment that sufficient funding is not available to manage a year-round bison herd (Comments made out of concern for resources, and/or concern that funding is not allocated for bison reintroduction)

Response 3236. We recognize that the proposed bison research area, including the necessary fencing, would be expensive and time-consuming to implement. While we believe that this research is important to better understand the potential effects of bison on this landscape, we would not pursue this effort unless sufficient funding and resources were in place. Any bison fencing would

be constructed to allow the safe passage of elk and other wildlife.

Comment 3239. Comment that bison reintroduction should not occur until the elk population has been reduced (Comment made out of concern for resource impacts)

Response 3239. Thank you for your comment. See the response to comment 3233.

Comment 3302. Specific substantive comment about water resources management (specific text)

Comment 3302. *As water is becoming more and more limited, I think the [water resource management] goals listed here are a good starting point, but vague. The goals under option B are more thorough and overall I believe they are better. This is such an important issue, that the less vague [the goals are] the better.*

Response 3302. Thank you for your comment. The goals and objectives for water resources are vague in some ways because we can't predict future water availability and the specific infrastructure changes that may be needed in response. However, we have taken a hard look at historical flow patterns and the problems we are experiencing under current conditions. We recognize that we won't be able to get water to all the areas we have in the past, so we have looked at each management unit and identified how to get water to our highest priority areas for wildlife. Many of the specific infrastructure details would be addressed in a habitat management plan. The CCP will provide the overall management direction, and we'll have to adaptively manage to achieve the overall goals and objectives.

Comment 3402. Specific substantive comment about visitor services (specific text)

Comment 3402a. *In the Crestone and Baca area, appreciating nature and witnessing wildlife is a very high priority among residents, nonprofit organizations, businesses and visitors...There is no mention in the draft plan of Crestone's nature-related expertise, the spiritual centers, the character of the local communities, or the many residents and visitors who live in sacred relationship with the Earth. The draft never mentions people who want to learn from nature and live in harmony with nature.*

Response 3402a. The Improvement Act establishes six priority public uses of refuges: hunting, fishing, wildlife observation and photography, and environmental education and interpretation, and

we strive to provide for these uses if they are compatible with the refuge purposes. In the FEIS, we clarified that we would open the elk hunting and limited small game-hunting areas during hunting seasons to all members of the public. This would allow hunters and non-hunters to access these areas for wildlife observation, photography, and hunting.

Comment 3402b. *While we understand the need to be conservative when planning within the tight federal budget climate, the proposed pace of progress in developing basic plans and "facilities" is surprisingly slow. For example, Alternative B proposes to develop a "visitor service plan for the refuge complex that identifies specific programming elements including interpretive themes, messages, and audiences for wildlife observation, photography and interpretation" within 5 years (page 112). Certainly a basic plan that allows visitor materials and services, as well as basic environmental education, can move forward within the first year or so.*

Response 3402b. Comment noted. We are also eager to complete and implement a visitor services plan as soon as staffing and resources are available.

Comment 3402c. *A 2006 national study reports that 71 million Americans participate in wildlife watching compared with 30 million fishing and only 15 million hunting. The methodology dramatically undercounts "non-consumptive" activities on public land...*

Response 3402c. The methodology used in the socioeconomic analysis is consistent with what has been used for other refuges.

Comment 3411. Specific substantive comment about hunting management opportunities (specific text)

Comment 3411a. *The Stipulations Necessary to Ensure Compatibility of the hunting program on page 313 include: "Refuge staff would regularly solicit feedback from hunters regarding safety and the overall quality of their hunting experiences, and any suggestions they may have." This point needs to be expanded to include other refuge visitors (wildlife watching), local residents, businesses, community organizations and leaders.*

Response 3411a. Comment noted.

Comment 3411b. *The draft plan does not show that public hunting will achieve the Refuge conservation goals, specifically the goal of protecting riparian plant communities that birds depend upon.*

Response 3411b. See the response to comment 3413. We believe that hunting is an important management tool to help to keep elk from having an adverse impact on the habitat for other species of wildlife.

Comment 3411c. *Baca hunting should be a local draw.*

Response 3411c. Thank you for your input. The details of the hunting program will be further defined in the step-down hunting plan.

Comment 3411d. *If there is a proven ecological necessity and recreational need to include small game hunting in the plan, we strongly recommend that there be substantial buffers between each hunting area and the neighboring private land. For budget and security reasons, we also recommend eliminating one of the northern parking lots and one of the southern parking lots.*

Response 3411d. See the responses to comments 3419 and 4602.

Comment 3411e. *The draft plan notes the need to work with local landowners on the big game hunting program, but not the small game hunting (page 109). Local landowners must be treated with respect in considering any hunting program, including any small game hunting program.*

Response 3411e. See the responses to comments 3419 and 4602.

Comment 3411f. *All three alternatives include 5 parking areas for small game hunting. The two parking lots in the Moffat area are about 1.5 miles apart. The three in the south area are about three miles apart. No explanation is given for creating so many parking lots, nor any discussion of the expenses involved.*

Response 3411f. Thank you for your comment. See the response to comment 3419. The CCP describes the general number and location of public access—including parking areas—that may be needed within the 15-year implementation timeframe. Development of these facilities would occur as needed and as funding is available.

Comment 3411g. *[Don't] increase hunting across-the-board on all species (at least not in this first plan until more is known about species presence, their population growth rates, and if they are declining due to climate change), but allow elk hunting in some way to manage vegetation impacts. This could be coordinated with CPW to support their goals as well. Climate change models have indicated that impacts from climate change will be felt in the San Luis Valley before other areas of*

Colorado (Ray et al. 2008), so impacts are already happening and need to be given appropriate attention. There is science to support elk management. There is not science to support harvesting all the other species mentioned in the alternative.

Response 3411g. Thank you for your comment. We agree that any hunting program must be carefully managed to support wildlife and habitat objectives.

Comment 3411h. *Any hunting program must be rooted in local traditions and utilize local resources. We strongly recommend working with the Ute and other tribes with historical roots in the San Luis Valley, as well as with local experts on developing an intimate, respectful relationship with nature (such as John Milton and his Way of Nature team).*

Response 3411h. Comment noted. We welcome this type of input from local residents during the development of the step-down hunting plan.

Comment 3411i. *I would hope that any hunting plans would be studied thoroughly and perhaps more weight given to lower impact hunting such as bow hunting.*

Response 3411i. Comment noted. We will consider these factors during the development of the step-down hunting plan. We are committed to providing quality hunting experiences, including hunting opportunities that engage youth, build a conservation ethic, and are accessible for hunters with special needs.

Comment 3413. Comment opposed to hunting on the refuges (Comments made in opposition to any hunting and/or elk hunting on the refuges)

Response 3413. The Improvement Act established hunting as a priority public use if it is compatible with the refuge purposes. The Service believes that a high-quality managed hunting program is an important and compatible public use on the refuges. We also believe that there are mutual benefits to using public hunting as a management tool as well as an opportunity to provide for quality wildlife-dependent recreation (which has deep cultural roots in the San Luis Valley).

On Baca Refuge, in addition to having the ability to effectively manage elk to meet habitat objectives, we can assist CPW with meeting elk population objectives for the greater GMU 82. This would not necessarily be accomplished by taking more animals off the refuge, but more so by keeping elk more evenly distributed between refuge lands and other sur-

rounding lands, thus making them more accessible by hunters on all these lands. Low-intensity, longer duration hunting is the key to this effective and lasting redistribution, which would also allow for opportunities for a high-quality hunt on the refuge.

In addition to providing for hunting opportunities, we are proposing to balance the use of the refuge by consumptive and nonconsumptive users alike and taking steps to reduce the potential for conflicts between the two user groups.

Comment 3415. Comment opposing hunting on Baca Refuge (Comments made in opposition to any hunting and/or elk hunting on Baca Refuge specifically)

Response 3415. See the response to 3413.

Comment 3417. *Comment suggesting a five year moratorium on hunting (Comments generally made in opposition to elk or small game hunting on Baca Refuge)*

Response 3417. See the response to 3413. The step-down hunting plan will be completed before we can fully implement public hunting on the refuges. While we hope to complete this process as soon as possible to realize the habitat management and recreation benefits, initial implementation is expected to occur within 1-3 years, with full implementation to take much longer depending on the alternative.

Comment 3419. Comment opposing small game hunting on Baca Refuge (Comments in opposition of small game hunting, and that it is unnecessary on Baca Refuge)

Response 3419. See the response to 3413. We are proposing to allow limited small game hunting (rabbit) primarily on those lands where this use occurred prior to becoming a national wildlife refuge (northwest and southwest portions of the refuge). These are lands that were formerly owned by the Colorado State Land Board and were open for hunting. When we acquired these lands, this use was discontinued while we were assessing the refuge. We heard from many local residents who were upset because their wildlife-dependent uses of these public lands were curtailed. Because the public historically had access to these lands and because limited small game hunting is an appropriate use of refuge lands, we felt that we could compatibly reintroduce this use on these portions of the refuge without interfering with the purposes for which the refuge was

established. We anticipate that the numbers of small game hunters who would hunt these areas to be very small.

Comment 3421. Comment opposed to fishing on the refuges (Comments made in opposition of all consumptive activities on the refuges, including fishing)

Response 3421. Similar to hunting, the Improvement Act established fishing as a priority public use if it is compatible with refuge purposes. We believe that providing a fishing opportunity on Alamosa Refuge is compatible (refer to appendix D in the FEIS).

Comment 3431. Specific substantive comment about access management (specific text)

Comment 3431a. *Under the Preferred Alternative, the final CCP needs to state specifically that walking and biking will be permitted year-round along all three auto tour routes...The plan needs to state that bikers and walkers will not be required to travel in only one direction along the auto tour routes, as is currently required for visitors in vehicles.*

Response 3431a. Thank you for your input. This level of detail will be considered during the implementation and management process.

Comment 3431b. *Visitors utilizing the auto tour routes should be allowed to temporarily park their vehicles along the roadsides and be allowed to walk, bike, hike, walk pets, photograph, enjoy nature, etc., as long as the temporary parking site along the road does not create a public safety concern.*

Response 3431b. Thank you for your input.

Comment 3431c. *The Service should reconsider allowing access to the Refuge from Highway 17, unless a specific cost center has already been established to pay for regular garbage clean-up. If bear-proof garbage cans are not in place, there will be trash all over that part of the Refuge. Instead of access off of Highway 17, we recommend the creation of several pull-offs with associated signage, similar to what can be seen on the road leading to Great Sand Dunes National Park. The signage at these pull-offs should include the location of the new visitor's center, encouraging visitors to drive north to the main entrance.*

Response 3431c. Thank you for your input. These elements would be considered in detailed implementation plans.

Comment 3431d. *Baca should not have any more roads going through it and it should be managed to support wilderness character, however one educational loop (road) should be developed around one or several of the playas with signage that discusses history and value of the playas in this landscape...there is room to have education for the public along with wilderness for others. It doesn't make sense to say you can only have one or the other. FWS should be promoting both, and the Baca can accommodate both.*

Response 3431d. Thank you for your input.

Comment 3431e. *There are no trails set aside for biking. There is a growing problem in the Crestone and Baca area with bikers cutting trails in protected areas. It is important that the final CCP take into account the needs of bike-riding and the need to separate bikes from horses and walkers.*

Response 3431e. Thank you for your input. We would allow hiking and biking on the auto tour route, which ranges (seasonally) from approximately 15 to 22 miles (linear with a loop portion), and will be considered on some trails during implementation.

Comment 3431f. *Alternative B provides 47 miles of roads and 10 miles of trails...The draft plan does not specify which trails will be open to what types of use.*

Response 3431f. The CCP allows for the consideration of trails that allow biking and equestrian use; these determinations will be made as part of implementation and ongoing management.

Comment 3431g. *The viewing area that is currently shown on County Road N may be redundant to the one a mile or so farther along the auto tour route.*

Response 3431g. Thank you for your input.

Comment 3431h. *I hope a trail of longer length and with year-round access can be developed under [alternative B]...I don't think walking year-round should be allowed everywhere, but certainly a few more trails than currently allowed could be developed...The trail off the Auto Tour Loop in Monte Vista is too short to provide exercise. A walking trail similar to the Alamosa NWR trail along the Rio Grande should be considered.*

Response 3431h. Thank you for your input. These suggestions would be considered during implementation.

Comment 3431i. *Consider the possibility of elected days for non hunters to have access to areas that are not otherwise.*

Response 3431i. In the FEIS, we clarified that we would open the elk hunting and limited small game hunting areas during elk and rabbit hunting seasons to all members of the public. This would allow hunters and non-hunters access to these areas for wildlife observation, photography, and hunting.

Comment 3431j. *Reduce number of parking areas along Highway 17, freeing up funds for more pressing needs.*

Response 3431j. Thank you for your input.

Comment 3441. Comment that the Service should provide access for nonconsumptive recreation, including art forms beyond photography (Comments in support of expanding nonconsumptive visitor services beyond what is proposed, and/or concerns about access)

Response 3441. Comment noted. Photography is specifically listed as one of the six forms of “wildlife-dependent recreation” in the Improvement Act. We are interested in providing multiple opportunities for public education, contingent upon adequate refuge resources. In the FEIS, on Baca Refuge, we clarified that we would open the hunting areas (except archery) during the hunting seasons to all members of the public. This would allow hunters and non-hunters to access these areas for wildlife observation, photography, and hunting.

Comment 3451. Specific substantive comment about environmental education and outreach (specific text)

Comment 3451a. *It is crucial that all programs and materials include the local native tribes and archeological information. While the pre-European people of this area did not leave behind buildings like Mesa Verde, their life-ways are important and provide valuable guidance to us today. Surprisingly, the draft plan does not seem to include this.*

Response 3451a. Comment noted.

Comment 3451b. *[The Outreach] area of the draft plan is weak and slow-moving. Planning to take five years to develop a new map, brochure, website and social media is unacceptably slow. A basic website and social media program can be developed within a few months, not a few years. Working with the local media two times a year is not enough, and not particularly time-consuming for staff to do more.*

Response 3451b. Comment noted. We are eager to complete and implement a visitor services plan as soon as staffing and resources are available.

Comment 3501. Specific substantive comment about refuge operations and partnerships (specific text)

Comment 3501. *The final CCP must commit that if it is necessary to have some outdoor lighting around the visitor's center, or anywhere on the refuge, the lighting will conform to the guidelines established by the Baca Grande Property Owners Association.*

Response 3501. Comment noted. The CCP stipulates that all new facilities should be designed to limit their visual impact on the landscape, and that those on Baca Refuge should minimize light pollution.

Comment 3513. Comment that USFWS should partner with NPS on a joint bison management plan

Response 3513. Since 2010, the NPS has been a cooperating agency in our planning process, and we have been a cooperator on theirs. Although the NPS process has not occurred on the same timeline as our CCP process, we have also been a cooperating agency during their ungulate management planning process. We are actively engaged with NPS, CPW, and other partners, and we would continue to be engaged in collaborative, cross-boundary, and landscape-level management. However, differences in agency policies, mandates, timelines, management philosophies, and landscape objectives often preclude the same management techniques from occurring in the interface areas.

Comment 3524. *Comment that Baca Refuge should be managed separately with unique objectives (Comments made in reference to elk and habitat management objectives)*

Response 3524. We disagree with the suggestion that the three units of the refuge complex should be managed separately. Most of the habitats of the three refuges are very similar in all aspects except size. Overall, the habitats of Baca Refuge have been less manipulated than the other two refuges. Most of these habitats are represented on the other refuges as well. Objectives for these habitat types are very similar on all three refuges. Because we manage the three refuges as a complex, resources including staff and equipment are often shared. It would not be efficient to manage otherwise.

Comment 3525. Comment that the refuge should be closed at night (Comments made out of concern for wildlife and visual impacts)

Response 3525. National Wildlife Refuges are typically closed from sunset to sunrise. The proposed auto tour route would not be open at night, and law enforcement tools (including road closures) would be used when they are needed to protect resources and maintain visitor safety.

Comment 3801. Comment that natural predators should be used as a management tool (Comments suggesting that predators should be used to reduce elk populations rather than hunting)

Response 3801. Comment noted. Early in the planning process, we considered what role natural predators could play in reducing ungulate populations. After a review of all the legal considerations and other issues, we eliminated this element from further consideration (refer to chapter 3, section 3.10).

Comment 3802. Comment that fertility control should be considered to manage elk (Comments that non-lethal control should be used to reduce elk populations rather than hunting)

Response 3802. Major technical and social implications continue to exist when applying fertility control techniques to long-lived, free-ranging, and hunted populations (FWS and NPS 2007). Wildlife fertility control is usually practiced on small non-hunted populations, which are not found in GMU 82. Furthermore, the costs would be prohibitive given the size of the existing elk herd that freely migrates across several Federal jurisdictions and private land (refer to chapter 4, Other Wildlife Species). We determined that fertility control is not a reasonable alternative for reducing the elk population under any of the action alternatives.

4000 – Affected Environment and Environmental Consequences

Comment 4131. Comment about the effects of proposed actions on soundscapes (Comments about the impacts of public use on Baca Refuge to neighboring landowners)

Response 4131. As described in the draft CCP and EIS, noise levels from the increased traffic on refuge roads would be expected to remain within 15

to 45 decibels, which is typical for rural areas. Effects on soundscapes were determined based on typical traffic levels and sounds, rather than detailed modeling. As described in the DEIS, the auto tour route would be a considerable distance away from the Baca Grande subdivision and other sensitive areas, and most of the anticipated noise impacts are expected to be short-term or at levels that are typical for rural areas. Upon implementation, we would work with our neighbors to minimize impacts and reasonable concerns.

Comment 4201. Specific substantive comment about the effects of proposed actions on biological resources (specific text)

Comment 4201. The proposed expansion of the current auto tour route on the Alamosa Refuge and construction of a new auto tour route on the Baca Refuge would pose significant and adverse impacts to wildlife species and habitat, including: noise impacts from increased traffic; species mortality due to vehicle collisions; habitat fragmentation due to the construction of new roads; and the spread of noxious weeds from off-road driving.

Response 4201. While the expanded auto tour routes may result in some new impacts to these areas, we do not believe that the impacts would be significant. This is evidenced by existing auto tour routes on the refuges, and by the administration of other similar facilities throughout the refuge system. Individual resource issues and concerns will be evaluated and managed on an ongoing basis through monitoring, signage, invasive species management, and law enforcement.

Comment 4202. Comment that effects to pronghorn are not analyzed (Comments based out of concern for valley-wide pronghorn populations)

Response 4202. The draft CCP focuses on managing and maintaining habitats for a wide variety of wildlife species, including pronghorn. When we develop a CCP for a national wildlife refuge, we do not identify objectives for every species found on a refuge, nor are we studying these species other than making general observations. Instead, the objectives we have developed to improve the health and diversity of riparian and upland habitats for migratory birds should also benefit species such as mule deer and pronghorn. The State of Colorado has the primary responsibility for managing and protecting resident wildlife populations like mule deer and pronghorn. We cooperate closely with the State where possible to help them achieve their objectives for ungulates.

Comment 4232. Specific substantive comment about bison reintroduction (specific text)

Comment 4232. The alternatives in the CCP are weak on bison and admit making “minimal” or “negligible” benefit for bison conservation.

Response 4232. See the response to comment 3233.

Comment 4233. Comment about the effects of bison reintroduction on natural resources (Comments made in opposition to bison reintroduction, and that adding more grazers would result in impacts to soils, habitat, and food availability for other wildlife species)

Response 4233. We share your concerns about the potential effects of bison reintroduction on this landscape. Bison conservation is not a specific purpose of the refuge and we have concerns about the negative effects from other large ungulates (including elk) already on Baca Refuge. In addition, it is the Service’s policy not to pursue additional captive, fenced bison herds.

Therefore, we have proposed to research the potential of bison occurring on Baca Refuge to ensure their occurrence does not have an adverse impact on the habitats for other species. We have identified a specific research area that has roughly the same habitat-type breakdown as the overall FWS and NPS landscape. Our preferred alternative proposes research to see if bison can exist year-round on this landscape without negatively affecting the habitats for other wildlife species.

Comment 4301. Specific substantive comment about visitor services (specific text)

Comment 4301a. Speed limits are not included in the draft CCP, yet this affects noise levels and safety.

Response 4301a. Comment noted. This level of implementation and management is not typically specified in a CCP. We have noted under common to all alternatives, that visitor hours and other traffic regulations would follow existing Service policies and regulations.

Comment 4301b. The draft plan projects 15,000 visitors annually by year 15; the draft provides no estimates of seasonal patterns or number of cars at peak season, and no analysis of noise, privacy or visual impacts.

Response 4301b. The EIS includes an analysis of impacts to noise and visual impacts. We do not believe that proposed refuge facilities would significantly harm neighboring residents. Upon implementation, we would work with our neigh-

bors to minimize impacts and reasonable concerns.

Comment 4302. Comment about the potential conflicts between hunting and nonconsumptive visitors (Comments in opposition to hunting and/or concern about safety or user conflicts with other visitors)

Response 4302. The Improvement Act establishes six priority public uses of refuges: fishing, hunting, wildlife observation and photography, and environmental education and interpretation, and we strive to provide for those uses if they are compatible with the refuge purposes. In the past, we have been able to successfully provide this range of use with limited conflicts and issues, and we believe that this can be achieved under this CCP. In the FEIS, we clarified that we would open the elk hunting and small game hunting areas during elk and rabbit hunting seasons to all members of the public. This would allow hunters and non-hunters to access these areas for wildlife observation, photography, and hunting.

Comment 4311. Comment that the analysis of impacts of hunting is inadequate (Comment made in opposition to hunting)

Response 4311. Comment noted. We stand by the analysis that is presented in the CCP and EIS. See the response to comment 3413.

Comment 4312. Comment about visitor safety and risks posed by hunting (Comments made in opposition to hunting and/or concern about safety and conflicts with other visitors)

Response 4312. We believe that a high-quality managed hunting program is an important and compatible public use on the refuges. We are also committed to implementing a hunting program that is safe for participants, other visitors, and neighbors. The overall number of hunters on Baca Refuge is anticipated to be small. In the FEIS, we clarified that we would open the elk hunting and small game hunting areas during elk and rabbit hunting seasons to all members of the public. This would allow hunters and non-hunters to access these areas for wildlife observation, photography, and hunting.

Comment 4501. Specific substantive comment about socioeconomics (specific text)

Comment 4501a. According to FWS, “non-consumptive activities” generate 72% of the economic ben-

efits in communities surrounding wildlife refuges around the nation. The methodologies used in all of the studies we’ve examined severely understate the economic benefits of “non-consumptive” visitors while overstating the economic benefits from hunters.

Response 4501a. The methodology for the regional economic analysis is detailed in chapter 5, section 5.9. We contracted with economists from USGS to help us with the socioeconomic analysis. The rationale and IMPLAN model they used in generating the socioeconomic analysis has been used extensively within the Service as well as other Federal agencies.

Comment 4501b. *The section of Effects on the Socio-economic Environment contains some flawed analysis that significantly distorts the calculations and thus distorts the conclusions. One dramatic example: For the purposes of calculating their spending in the local community, non-local visitors who come to the refuge to view wildlife are counted as half a visitor; fishing visitors are counted as half a visitor; waterfowl and game hunters are counted as a whole visitor. Thus the model cuts in half the local spending for wildlife-watching visitors, relative to hunters. This is nonsense...A family or couple who come to enjoy nature are likely to spend a few hours on the refuge and a few hours in town...In contrast, most hunters spend all day on the land, eat on the tail-gate or out on the land, and maybe eat in a low-cost diner. There is further distortion in the economic studies that overstate the benefits of hunting to the local economy. Most expenditures by hunters are for guns, ammunition, land, vehicles and specialized equipment. Little if any of that spending benefits the local economy. The local county pays for the roads, police and other services...At the same, oft-cited studies understate the number of people who enjoy observing wild animals in their natural setting. For example, a 2006 national study of wildlife-dependent recreation counts you as a non-local wildlife watcher only if the primary purpose of your trip is to observe, feed or photograph wildlife...Outdoor recreation is not counted. That means trail running, mountain biking, backpacking, hiking, etc. are not counted, no matter how many wild animals you visit with. Yet, the results of this study are cited to compare the number of people engaged in wildlife watching, hunting and fishing - as well as spending associated with each activity...The economic analysis presented in the draft plan says nothing about the local economy of the Crestone/Baca/Moffat area. It does not acknowledge or study the significant potential benefits to*

the town of bringing in thousands of wildlife-watching visitors to the area. We recommend that the economic analysis be significantly improved to provide more meaningful and useful results.

Response 4501b. We stand by the methodology used in the socioeconomic analysis. The economic analysis looked at the local economy of all the counties, including Alamosa, Costilla, Rio Grande, and Saguache counties (refer to the DEIS, page 226-229). The analysis also looked at a number of factors that are directly related to how many jobs are created in the local economy, including refuge staff spending within the local economy, refuge revenues, and projected visitor numbers. You are correct that not all outdoor recreation is provided for or counted on a refuge. For example, there are no backpacking destinations in the refuge complex, and we don't provide trails for the purpose of trail running. We did not speculate about the potential for thousands of nonlocal, wildlife-watching visitors flocking to the area as soon as the refuge is opened. We did make some modest projections on the number of visitors that we would expect to see as we slowly open Baca Refuge to a few seasonally available trails, put in a rudimentary auto tour route, offer a few interpretive or educational programs or events, and provide for a few hunters on the refuge each day. We would expect that many of the regular users would come from the local area.

Comment 4511. Specific substantive comment about the effects of proposed actions on the local economy (specific text)

Comment 4511a. *The hunting compatibility determination in the draft CCP...does not take into account the impact of hunting on the community's public image, which affects local tourism and property values.*

Response 4511a. We believe that a high-quality managed hunting program is an important and compatible public use on the refuges. We also believe that there are benefits from using public hunting as a habitat management tool as well as from providing for quality wildlife-dependent recreation. While values and preferences vary by community and individual, it is understood that hunting has deep cultural roots in many parts of the San Luis Valley. The overall number of hunters on Baca Refuge is anticipated to be small. In the FEIS, we clarified that we would open the elk hunting and small game hunting areas during elk and rabbit hunting seasons to all members of the public. This would allow hunters and non-hunters access to these areas for wildlife observation, photography, and hunting.

Comment 4511b. *Want refuge to be a contributing member of local community. Historically, public lands are not...Concern is that plan would like to see intact ecosystems as an economic driver. Looking towards a tourism industry—we don't like people coming and going away.*

Response 4511b. Comment noted. We would also like to see the refuges continue to make positive contributions to the local economies. However, our primary objective is to manage the refuges to meet our goals and objectives for wildlife, habitat, and compatible wildlife-dependent recreation. We look forward to collaborating with local communities and stakeholders to make the most of mutually beneficial opportunities.

Comment 4511c. *Want to advocate for wildlife and less use in wildlife area, but need to have explanation as to how it helps our community. Our community and county is poor. We're surrounded by public lands and that hurts economy. If we can bring people in to enjoy refuge and our areas as tourists that would be great.*

Response 4511c. See the response to comment 4511b.

Comment 4515. Comment that recreational hunting is in conflict with the values of local residents and the spiritual communities that are central to the local economy (Concerns about hunting on Baca Refuge near the Crestone community)

Response 4515. See the response to comment 3413 regarding hunting and comment 4303 regarding visitor use conflicts. While we like to see the refuges make positive contributions to the local economy, our primary objective is to manage the refuges in a manner that meets our goals and objectives for wildlife, habitat, and compatible recreation. We look forward to collaborating with local communities and stakeholders to make the most of mutually beneficial opportunities.

Comment 4516. Comment that the values of the local residents and spiritual communities are not mentioned in the plan and EIS (Concerns about hunting on Baca Refuge near the Crestone community and that this was not considered in the planning process)

Response 4516. See the response to comment 3413 regarding hunting. While our primary objective is to manage the refuges to meet our goals and objectives for wildlife, habitat, and compatible recreation, we remain committed to collaborating with local communities and stakeholders to implement our objectives in a manner that is reasonably

consistent with the values of neighboring communities.

Comment 4602. Comment that the plan does not consider the effects of proposed actions on noise and privacy for adjacent property owners (Concerns about visitor use on Baca Refuge and potential impacts to neighbors)

Response 4602. The potential effects of proposed actions on noise and visual impacts are documented in the DEIS. The noise from increased traffic on refuge roads would be expected to remain within 15 to 45 decibels, which is typical for rural areas. As described in the DEIS, portions of the auto tour route would be visible to some neighbors, but would be a considerable distance away from the Baca Grande subdivision and other sensitive areas, and most of the anticipated noise impacts are expected to be short-term or at levels that are typical for rural areas. Upon implementation, we would work with our neighbors to minimize impacts and reasonable concerns.

5000 – NEPA Process

Comment 5101. Comment that the public involvement process has been inadequate (Comments that the public scoping process was not made public enough and that broad outreach was not achieved)

Response 5101. We disagree. Opportunities for public input and comment have met or exceeded NEPA requirements and Service policies. We held three public meetings during the scoping phase of the project, three public meetings on the draft alternatives, and, after the release of the DEIS in August 2014, we held three public meetings at which we provided ample opportunity for public involvement. During each phase, we provided press releases to all media outlets, put information about the planning process on our Web site, and mailed out planning updates in advance of the public meetings. Following the release of the DEIS, we briefed all the county commissioners on the project and also briefed several stakeholder groups. We also posted notices in the Federal Register.

Comment 5201. Specific substantive comment about the Draft CCP and EIS document (specific text)

Comment 5201a. *Could I please get a reference list for the references that were used as the science foundation or basis for the alternatives? There was a*

nice bibliography in the draft CCP document, but few references on the actual alternatives. I understand that the CCP may not be required to present citations or be a science document or present a lot of science, but I'd like to know what the alternatives were based on.

Response 5201a. Under each alternative, we have identified the objectives and strategies that we want to accomplish over 15 years. For every objective, we discussed the rationale behind it. We cited all the scientific literature that we felt was relevant to the rationale for the specific objective. For the CCP, we reviewed hundreds of scientific documents, conducted an in-depth evaluation of the hydrogeomorphic conditions of the refuge complex, documented refuge staff observations, and cited data that we had in our files. Although it is not clear what specific citation you think should have been included in the discussion on bison, we did update the affected environment section and bibliography in the FEIS to include some of the literature references on bison that had not been published at the time the DEIS was written.

Comment 5201b. *We encourage the refuge team to reach out and engage people who may not be familiar with the local opportunities to see wildlife and learn about the local environment. As the draft plan acknowledges on page 277, "We are committed to ensuring that all members of the public have equal access to America's fish and wildlife resources, as well as equal access that would enable them to meaningfully take part in activities and policy shaping." It is unclear whether the refuge team has done this in developing the draft plan. There is no evidence in the draft of participation by tribes, young people, Spanish-speaking resident or leaders from lower-income areas.*

Response 5201b. Thank you for your comment. The CCP planning process included outreach to a wide variety of groups, including local governments, tribal governments, and organizations. While we agree that the participation of underserved communities is not always as strong as it could be, we remain committed to our efforts to reach out to all members of the public.

Comment 5203. Comment that the analysis in the Draft CCP and EIS is inadequate

Response 5203. We recognize the objections by some individuals to some proposed management objectives, particularly those related to hunting, access management, and bison reintroduction. Despite these areas of contention, we stand by the analysis of effects described in the DEIS and FEIS.

Based on the comments and suggestions on the DEIS, we made minor changes to the alternatives and clarified some of the key concepts and analyses. These changes to the FEIS are summarized in Appendix B.

Comment 5204. Specific suggested addition to the CCP and EIS document and analysis (specific text)

Comment 5204. *There are no specific mitigation provisions discussed within the DEIS that highlight specific design strategies for preventing wildlife-vehicle collisions along the auto tour routes. This issue needs to be investigated in further detail for the FEIS.*

Response 5204. Wildlife-vehicle collisions are very rare on our auto tour routes on Alamosa and Monte Vista Refuges because speed limits are very low. We understand your concern about future refuge operations. We are always concerned about the safety of our visitor operations, and these are inherently built into all of our visitor services. In the long term, the auto tour route on Baca Refuge would be similar in width and design to those on the other refuges, which would preclude fast speeds. Generally, a CCP does not get into specific design guidelines for roads.

Comment 5206. Comment that the Draft CCP and EIS ignores current scientific research (Comment made in opposition to lethal removal of elk, and that reducing the size of the herd is unlikely to reduce impacts to riparian plants)

Response 5206. As described in the CCP and EIS, we are concerned about the effects of elk overbrowsing on riparian habitat. These concerns are supported by our monitoring, observations, and multiple studies cited in the document. We also recognize more recent research related to ungulate herbivory on the greater landscape. This more recent research has certainly been helpful in our discussions with our partners, but it has not addressed the specific questions that we have about the potential effects bison would have on the habitats that support a variety of other trust species that we are mandated to provide for under the purposes of the refuge. Much of the current research suggests that the carrying capacity of these habitats has not been met, but does not describe how habitat changes resulting from year-long bison occurrence would be suited to meet the life-cycle needs of the wildlife that exist and thrive here currently. In the FEIS, we updated our bibliography to include some of the studies that were finalized about the time we published our DEIS.

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