

# Draft Environmental Assessment, Land Protection Plan, and Conceptual Management Plan for the National Wildlife Refuge System

*Proposed New Urban National  
Wildlife Refuge  
Bernalillo County, New Mexico*

*July 2011*

Draft Environmental Assessment for the  
National Wildlife Refuge System

Proposed New Urban National Wildlife Refuge,  
Bernalillo County, New Mexico

July 15, 2011

U.S Fish and Wildlife Service  
National Wildlife Refuge System  
Southwest Region  
Division of Planning  
Albuquerque, NM

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## **1.0 PURPOSE OF AND NEED FOR PROPOSED ACTION**

### **1.1 Introduction**

The United States Fish and Wildlife Service (Service) is proposing to acquire the 570-acre Price's Dairy and the associated water rights for establishment of a new National Wildlife Refuge in Bernalillo County, New Mexico. This Environmental Assessment (EA) is being prepared to evaluate the effects associated with this proposal and complies with the National Environmental Policy Act (NEPA) in accordance with Council on Environmental Quality regulations (40 CFR 1500-1509) and Department of the Interior (516 DM 8) and Service (550 FW 3) policies. Bernalillo County is a formal cooperating agency in the preparation of this EA and has contributed staff time, information, and review of all documents prior to their release for public comment. NEPA requires examination of the effects of proposed actions on the natural and human environment. In the following chapters, we present two alternatives and analyze the environmental consequences of each.

The scope of this draft Environmental Assessment is limited to the proposed acquisition of lands for establishment of a new National Wildlife Refuge. The Environmental Assessment is not intended to address the development or implementation of detailed, site-specific programs for the administration and management of the property. An attached conceptual management plan (Appendix 2) and interim compatibility determinations provide general outlines on how the proposed Refuge would be managed.

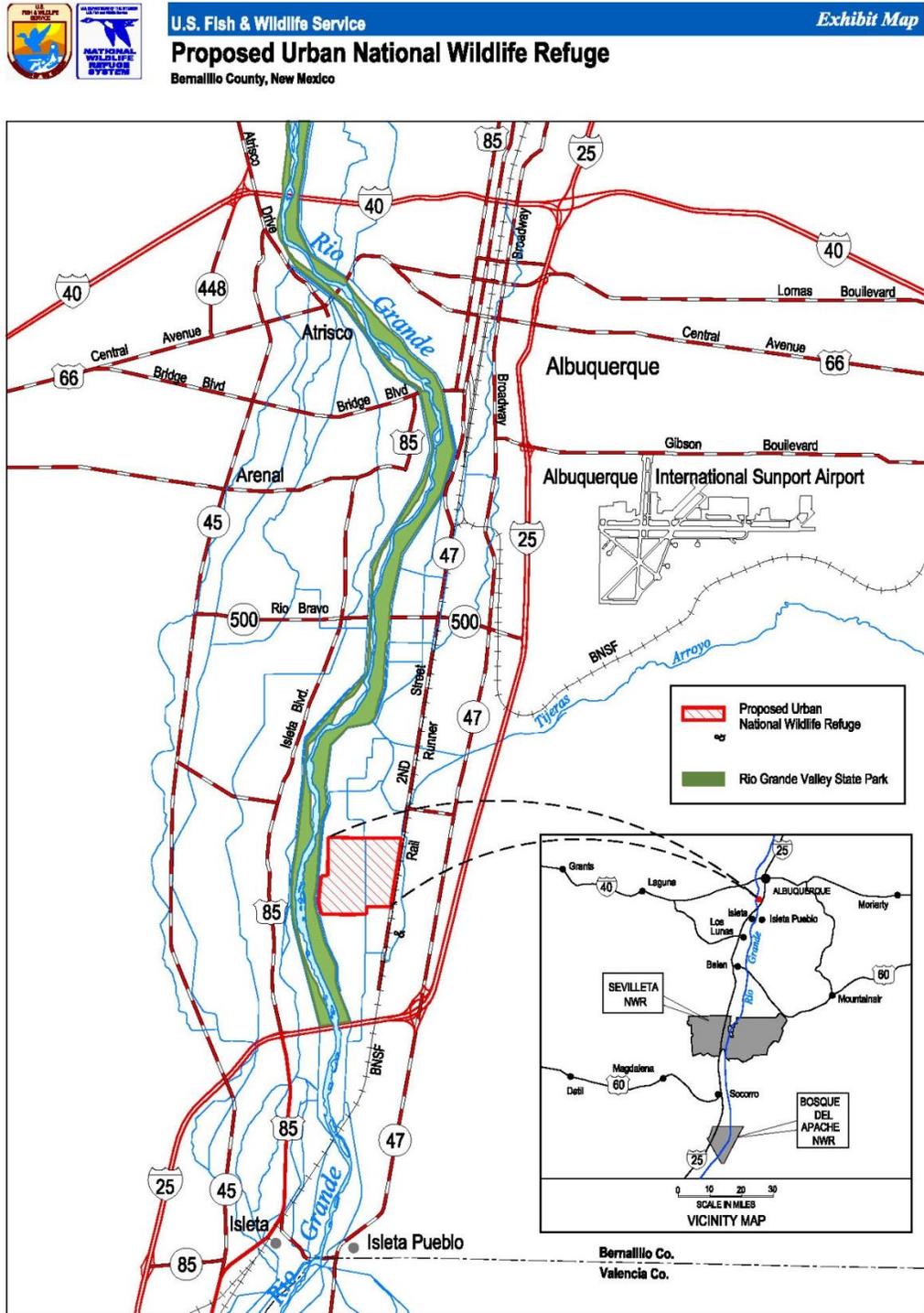
### **1.2 Location**

Price's Dairy is located on 2<sup>nd</sup> Street in the South Valley, Bernalillo County, New Mexico, five miles south of downtown Albuquerque, near one of the longest rivers in North America, the scenic Rio Grande (see figure 1).

### **1.3 Background**

The U.S. Fish and Wildlife Service is the principal federal agency with the responsibility for conserving, protecting, and enhancing fish and wildlife and plants and their habitats for the continuing benefit of the American people. The Service manages the 150 million-acre National Wildlife Refuge System (System) which encompasses more than 552 national wildlife Refuges, thousands of small wetlands and other special management areas. It also operates 70 national fish hatcheries, 64 fishery resource offices, and 78 ecological services field stations. The agency enforces federal wildlife laws, administers the Endangered Species Act, manages migratory bird populations, restores nationally significant fisheries, conserves and restores wildlife habitat such as wetlands, and helps foreign governments with their conservation efforts. It also oversees the Wildlife and Sport Fish Restoration program that distributes hundreds of millions of dollars in excise taxes on fishing and hunting equipment to state fish and wildlife agencies.

Figure 1. Location Map



Produced in the Division of Realty  
 Albuquerque, New Mexico  
 Base Map: U.S.G.S. DRGs and other official information  
 Map Projection: NAD, 1927, NM State Plane, C-Zone, U.S. Feet  
 Map Date: 01/26/2011  
 Revised: 06/23/2011

New Mexico Principal Meridian  
 0 1 2 3 Miles



The mission of the National Wildlife Refuge System is:

“... to administer a national network of lands and waters for the conservation, management and, where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans” (National Wildlife Refuge System Improvement Act of 1997, Public Law 105-57).

#### **1.4 Purpose and Need**

The goals of the National Wildlife Refuge System are to:

- 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 interjurisdictional 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 underrepresented in existing protection efforts;
- provide and enhance opportunities to participate in compatible wildlife-dependent recreation (hunting, fishing, wildlife observation and photography, environmental education and interpretation); and
- foster understanding and instill appreciation of the diversity and interconnectedness of fish, wildlife, and plants and their habitats.

The primary purpose of the Proposed Action is to protect the land and water needed to provide Refuge visitors from a large urban area with an understanding and appreciation of fish and wildlife resources through environmental education and interpretation and through wildlife-oriented recreational experiences.

Establishing the proposed Refuge would:

- Foster environmental awareness through environmental education opportunities and outreach programs,
- expose an urban population to the larger USFWS Refuge system,
- develop an informed and involved citizenry that will support fish and wildlife conservation,
- expand outdoor recreation opportunities in proximity to the State Park trail system in the Rio Grande bosque,
- conserve and enhance the natural resource values that may be degraded or lost through conversion of the property to other uses, including the loss of water rights associated with the property,
- capitalize on the Service’s partnership with Bernalillo County to achieve shared goals.

At 570 acres, this former dairy is one of the largest remaining undeveloped farms in the Middle Rio Grande Valley and the largest agricultural property within the Albuquerque metro region. The opportunity exists now to preserve this property to provide environmental education to a diverse under-served public, engage urban citizens in the National Wildlife Refuge System,

restore wildlife habitat, preserve the historical and cultural values intrinsic to the Middle Rio Grande, and provide compatible, non-consumptive wildlife-dependent recreation.

As of the 2010 census Bernalillo County's population stood at 662,564, and had grown by 16.0 percent since 2000 (<http://www.cubitplanning.com/county/2618-bernalillo-county-census-2010-population>). The City of Albuquerque is among the fastest growing urban areas in the United States and its growth often contributes to a loss of cultural resources while further stressing the natural resources of the Middle Rio Grande Valley and the Rio Grande. Given the property's size and location, it has been the target of various development proposals as well as efforts by various federal, state, and local agencies to preserve and protect the property. During that time, other large properties on the river have been sub-divided, developed, and the water rights sold to support other needs. This tract's high development potential and senior water rights attest to the value it could easily bring if it were sold on the open market.

This proposed new National Wildlife Refuge in Bernalillo County, New Mexico would constitute an urban Refuge and be a contribution by the Southwest Region of the Service to a conservation partnership with Bernalillo County in the South Valley area of Albuquerque. If the Refuge is not established there would be loss of an important urban outdoor educational opportunity for the Service to help maintain the connection of Americans to nature and the great outdoors. The Service defines urban Refuges as those lands and waters in, or adjacent to, metropolitan areas with populations over 100,000 people. Some urban Refuges may protect habitats of great significance to the conservation of fish and wildlife resources, including endangered and threatened species. However, the primary purpose for establishment of urban Refuges is to foster environmental awareness and outreach programs, and to develop an informed and involved citizenry that will support fish and wildlife conservation. These Refuges will provide visitor use benefits associated with fish and wildlife resources that may include, but not be limited to, wildlife viewing, nature photography, scientific research, environmental education, maintaining open space in an urban setting, and protecting cultural resources.



The need for connecting urban youth to nature is more critical than ever. Today, the average student spends nearly 7.5 hours of each day on “screen time” – during school, watching television, video gaming and on-line with computers and smartphones. The resulting disconnect from nature is reflected in the lack of understanding and appreciation of the natural world by our nation's youth.

Environmental education opportunities will be available at the Refuge - FWS Photo

The Price's Dairy site is easily accessible to the metro Albuquerque area and Bernalillo County, a half-hour drive from 40 percent of the state's population, and could provide outstanding opportunities for outdoor experiences. The development of an urban Refuge focused on providing outdoor experiences for urban youth, particularly upper elementary age students, but inclusive of all ages will help connect youth to nature.

The Refuge could offer a number of benefits for the public: bolstering environmental education for youth; providing a gateway for an urban population to the larger regional Service Refuge System and broader conservation goals; as open space and as a trailhead to the adjacent bosque; providing recreational opportunities and maintaining quality of life for the nearby community; protecting the natural resource values that would be lost through development of the property and loss of its water rights; and recognizing the rich cultural history of the Middle Rio Grande Valley. Its proximity to the Rio Grande, large undeveloped acreage and existing farming activity offer the Service and partnering agencies an opportunity to engage in sustainable environmental enhancement practices while connecting young people and urban residents to the natural world. Loss of the water rights from the property would have consequences on the local habitat as well as the greater Middle Rio Grande Ecosystem. There would be less water entering an already stressed hydrologic system and no contribution of water or land to support endangered species, to promote the biological integrity of the Middle Rio Grande habitat corridor, or to support ecological restoration efforts. In addition, with the establishment of the Refuge and the potential for the Service to develop a major environmental education program and visitor's center at the site, there is also enhanced opportunity for economic stimulus to the South Valley.

An urban wildlife Refuge would be important for the following values and benefits:

- Educational opportunities for diverse underserved urban youth, as well as for adult of all ages from the metropolitan area
- Expose urban populations to the USFWS National Wildlife Refuge System
- Partnership opportunities with educational institutions and resource agencies
- Trail connection to the Paseo del Bosque Trail and Rio Grande Valley State Park
- Enhanced public recreation opportunities in the South Valley of Bernalillo County
- Preservation of open space in metro Albuquerque
- Demonstration area for restoration to native habitats
- Education area for importance of endangered species and habitat conservation
- Recognition of the significance of agriculture in the Middle Rio Grande Valley
- Benefits of maintaining water use for ecological values and habitat restoration

The history of land uses along the Middle Rio Grande and its watershed started with extensive Native American settlement and utilization. Following European settlement land use was dominated by livestock grazing and farming until 20th century urban development accelerated, all of which have impacted the river corridor's biological integrity and contributed to major export or utilization of surface and groundwater. Ongoing threats to the area include urban development, surface and groundwater pumping for agriculture and urban uses, human-caused wildfires in the bosque, and spread of non-native plants.

National Wildlife Refuges are established for particular purposes. Formal establishment is generally based upon a statute or executive order that specifies a purpose for that Refuge. This proposed project would be administered as part of the Refuge System in accordance with the National Wildlife Refuge System Administration Act of 1966 and other relevant legislation, executive orders, regulations, and policies. The Refuge would be established under the Refuge Recreation Act of September 28, 1962 (16 U.S.C. 460k-460k-4), as amended, and the Fish and Wildlife Act of 1956 (16 U.S.C. 742a-742j), as amended. Acquisition funding could be provided through the Land and Water Conservation Fund and Migratory Bird Conservation Act Fund. Bernalillo County has pledged \$5 million to purchase an overlying conservation easement on the property to help support acquisition and ensure visitor access to the new Refuge.

**Refuge Purpose:** The primary purpose for establishment is to create a Refuge “*suitable for— (1) incidental fish and wildlife-oriented recreational development, (2) the protection of natural resources, (3) the conservation of endangered species or threatened species*” ... The Refuge Recreation Act (16 U.S.C. § 460k-460k-4) authorized the Secretary of the Interior to administer Refuges, hatcheries and other conservation areas for recreational use, when such uses do not interfere with the area's primary purposes.

A secondary purpose would be “... *For the development, advancement, management, conservation, and protection of fish and wildlife resources.* (Fish and Wildlife Act of 1956 16 U.S.C. 742a-742j).

The primary goal for the Refuge would be “...to foster environmental awareness and outreach programs, and to develop an informed and involved citizenry that will support fish and wildlife conservation.” (USFWS Refuge Manual 341 FW 1).

### **1.5 Study Area**

Price’s Dairy is located on 2nd Street in the South Valley, Bernalillo County, New Mexico, five miles south of downtown Albuquerque, near one of the longest rivers in North America, the scenic Rio Grande. The property is located at the most northern end of the Chihuahuan desert within the historic floodplain of the Rio Grande. Very little native habitat representing the Chihuahuan desert or the river’s habitat currently exists on the property. The 570-acre property was operated as a dairy from the 1920’s to the 1990’s and since then has been used for alfalfa and grass hay production. The property is located adjacent to the Albuquerque Riverside Drain and the Williams Lateral that provides irrigation water delivery on the east side of the Rio Grande bosque (adjacent to the Rio Grande Valley State Park), which has some limited riparian cover including native cottonwood and willow species and non-native Russian olive and Siberian elm trees.

The site’s location adjacent to the bosque and the Rio Grande Valley State Park will buffer the effects of urban and semi-rural development that currently surrounds the tract on three sides. Habitat restoration on the Refuge will enhance the existing connection for wildlife, such as neotropical birds using the property with the Rio Grande bosque on the west side of the Williams Lateral and Riverside Drain. The Middle Rio Grande bosque occasionally suffers from human-caused wildfires due to its proximity to a dense urban population. The bosque immediately west of the tract suffered a wildfire in recent years and various agencies are actively restoring it now.

The tract will also provide additional cover for terrestrial species that move north and south along the east side of the channel, which is often barren in other reaches. The Barr Interior Drain and grid of smaller irrigation ditches and laterals crosses the tract. Along 2nd Street on the east side of the tract several buildings left over from the dairy era are still being used for offices, a residence for an on-site caretaker, other residences, and equipment storage. The tract has one well that is not currently used. Land use in the immediate surrounding area is mostly in the form of low-density residential and light industrial development, a railroad track, and some small farms.

### **1.6 Related Actions**

The Service is coordinating with other public and private entities in the project area. Establishment of the Refuge would provide opportunities for extensive partnerships with federal, state, local, academic, non-profit, and private entities. Bernalillo County (County) has pledged \$5 million towards the purchase of a conservation easement on the property to provide for public access to the site as part of the County's Open Space Program, contingent on Service acquisition being initiated by September 2012. The County has an interest in developing complementary interpretive and programmatic opportunities, in conjunction with the Service, to inform the public about the site's ecology and the rural historical land uses of the Middle Rio Grande since pre-colonial times. The Service, working with the County Open Space Program and other potential interested partners, plans to develop environmental learning and outdoor recreation facilities that would emphasize outdoor learning and recreational experiences, especially as they relate to the adjacent Rio Grande Valley State Park. State Parks staff has expressed an interest in working with the Service to coordinate environmental education programs. The El Camino Real de Tierra Adentro National Historic Trail, administered by the Bureau of Land Management and National Park Service, is on, or adjacent to the site and creates another opportunity for historical interpretation.

The Albuquerque Metropolitan Arroyo and Flood Control Authority (AMAFCA) has proposed placing a 60-acre floodwater retention basin and associated channel improvements on the site of the propose Refuge. Service staff have communicated concerns about potential impacts from such a project regarding contaminants, solid waste, and invasive weeds, and have questioned if this proposed use would be consistent with establishment of the Refuge. Staff will continue to work with AMAFCA in an effort to cooperatively address these concerns, while recognizing the importance of addressing drainage and storm water management in the South Valley area.

### **1.7 Decision(s) to be Made**

The Service's planning team including the cooperating agency, Bernalillo County, will complete an analysis of the environment and management alternatives. Based on the analysis, documented in this Environmental Assessment, the Service's Regional Director for the Southwest Region, with concurrence of the Director of the Fish and Wildlife Service, will make two decisions.

- Determine whether or not the Service should establish the Refuge through acquisition of the Price's Dairy.
- If yes, determine whether the selected alternative would have significant impact on the quality of the human environment. The National Environmental Policy Act of 1969 requires that federal agencies make this decision. If the quality of the human environmental would not

be significantly affected, a finding of no significant impact (FONSI) will be signed and made available to the public. If the alternative would have a significant impact, completion of an environmental impact statement would be required to address those impacts.

### **1.8 Regulatory Compliance**

This EA was prepared by the Service and represents compliance with applicable federal statutes, regulations, Executive Orders, and other compliance documents, including the following:

- Administrative Procedures Act (5 U.S.C. 551-559, 701-706, and 801-808) as amended
- American Indian Religious Freedom Act of 1978 (42 U.S.C. 1996)
- Antiquities Act of 1906 (16 U.S.C. 431-433)
- Archaeological Resources Protection Act of 1979 (16 U.S.C. 470)
- Bald Eagle Protection Act (16 U.S.C. 668-668d) as amended
- Clean Air Act of 1972, as amended (42 U.S.C. 7401 *et seq.*)
- Clean Water Act of 1972, as amended (33 U.S.C. 1251 *et seq.*)
- Endangered Species Act of 1973, (ESA) as amended (16 U.S.C. 1531 *et seq.*)
- Executive Order 12898, Federal Action Alternatives to Address Environmental Justice in Minority Populations and Low Income Populations, 1994.
- Executive Order 13112, Invasive Species (issued in February 1999)
- Fish and Wildlife Coordination Act of 1958, as amended (16 U.S.C. 661 *et seq.*)
- Fish and Wildlife Improvement Act of 1978 (16 U.S.C. 7421)
- Floodplain Management (Executive Order 11988)
- Migratory Bird Treaty Act (16 U.S.C. 703-712 as amended)
- National Refuge System Administration Act of 1966 (16 U.S.C. 668dd-668ee) as amended
- National Environmental Policy Act (NEPA) of 1969, as amended (42 U.S.C. 4321 *et seq.*)
- Regulations for Implementing the Procedural Provisions of NEPA (40 CFR 1500 *et seq.*)
- National Historic Preservation Act of 1966, as amended (16 U.S.C. 470 *et seq.*)
- Native American Graves Protection and Repatriation Act of 1990 (25 U.S.C. 3001 *et seq.*)
- Protection and Enhancement of the Cultural Environment (Executive Order 11593)
- Protection of Wetlands (Executive Order 11990)
- National Pollutant Discharge Elimination System, as amended (33 U.S.C. 1251 *et seq.*)
- Soil and Water Conservation Act of 1977 (16 U.S.C. 2001-2009) as amended

Further, this EA reflects compliance with applicable State of New Mexico and local regulations, statutes, policies, and standards for conserving the environment and environmental resources such as water and air quality, and the required Endangered Species Act Section 7 consultation.

### **1.9 Public Participation and Issue Identification**

Public input was solicited and background information regarding the project proposal was presented to the public in a number of different ways. Press releases were issued in Albuquerque and major communities with a 60-mile radius. Interviews were conducted with the major print and television media outlets. Approximately 15 meetings were conducted with key stakeholders, community members, and other interested parties. Three public meetings (described below) were conducted in the Albuquerque metro area in February 2011 during the initial scoping process to identify issues to be analyzed for the proposed project. The meeting format was open house with

approximately 1 hour of presentations, a question and answer session with a panel of Service staff, followed by the opportunity to visit various stations with specific subject matter experts describing the project and to talk with Service and Bernalillo County staff in more detail. At each of the meetings a planning update packet was distributed with information on the proposed project, an estimated project time line, common questions and answers, and a sign-up sheet to receive future information. This planning update was also available on the Region's website and a special email account was created to accept comments.

At least 49 landowners, citizens, and elected officials (or their representatives) attended the meetings and most expressed support for the project. Additionally, there were 16 written submissions providing comments and identifying issues and concerns. The Service's field staff contacted local government officials, other public agencies, neighborhood organizations, and conservation groups that have expressed an interest in the project.

#### Initial Public Scoping Meetings in Albuquerque, NM

Tuesday February 7th 3-5 pm  
Mountain View Community Center  
201 Prosperity Avenue, SE

Thursday February 9th 6-8 pm  
Raymond G. Sanchez Community Center  
9800 4th Street, NW

Saturday February 12th 10am-noon  
South Valley Multipurpose Center  
2008 Larrazolo Road, SW

This Environmental Assessment, along with the Land Protection Plan, Conceptual Management Plan, and Interim Compatibility Determinations will be made available for a 30-day public review and comment period. After this, comments will be evaluated, incorporated, and responded to, and final decision documents will be prepared and made available to the public in the Fall of 2011.

#### **1.10 Issues Identified During Scoping**

The following questions or issues were raised during the public meetings or through other contacts.

- Traffic and vehicular access to the proposed Refuge
- Trespass onto adjacent private properties, security
- Increasing numbers of birds to the site that may pose a hazard to air traffic passing over the site to or from the Albuquerque International Sunport
- The impacts of noise from air traffic using the Albuquerque International Sunport on the outdoor experience

- Changes in types of habitat available on the property and subsequent changes in types and numbers of wildlife using the site
- Presence of contaminants from historic agricultural operations
- High anticipated acquisition cost of the property and the sources of the funding that would be used for acquisition
- Is there really a need for the Refuge when there are existing facilities around Albuquerque that could be used for wildlife viewing and outdoor education
- What types of recreational uses are allowed on a new Refuge
- Should the new Refuge be established as a Unit of Bosque del Apache National Wildlife Refuge

### **1.11 Land Acquisition Process**

The Service acquires lands and interests in lands, such as easements, and management rights in lands through leases or cooperative agreements, consistent with legislation or other congressional guidelines and executive orders, for the conservation of fish and wildlife and to provide wildlife-dependent public use for recreational and educational purposes. When land is needed to achieve those objectives, the Service seeks to acquire the minimum interest necessary to reach those objectives. If fee title is required, the Service gives full consideration to extended use reservations, exchanges, or other alternatives that will lessen the impact on the owner and the community. Donations of desired lands or interests are encouraged. In all fee title acquisition cases, the Service is required by the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (Public Law 91-646) to offer 100 percent of the property's appraised market value, as set out in an approved appraisal that meets professional standards and federal requirements. Land interests are acquired only from willing sellers/donors and are subject to the availability of funding. The presence of a National Wildlife Refuge would not mean increased regulation of adjacent private land uses.

The Refuge would be established under the Refuge Recreation Act of 1962, as amended, and the Fish and Wildlife Act of 1956, as amended. The federal money used to acquire interest in land for natural resource protection is from the Land and Water Conservation Fund, which is derived primarily from oil and gas leases on the outer continental shelf, motorboat fuel tax revenues, and sale of surplus federal property. There could be additional funds to acquire lands, waters, or interest therein for fish and wildlife conservation purposes through other congressional appropriations, donations, or grants from non-profit organizations and other sources.

While land owned by the U.S. Government is not taxable by state or local authorities, the federal government has a program in place to compensate local governments for foregone tax revenues. The Refuge System typically makes an annual payment, called Refuge Revenue Sharing, in lieu of taxes to local governments. The amount of the payment depends on the final Congressional budget appropriations for the Service for that year. The presence of the urban Refuge and its

education center should be an environmental and economic benefit to residents of the South Valley, Albuquerque and Bernalillo County, and visitors to the local area.

Eligibility for relocation assistance for tenants on the property will be assessed under Public Law 91-646. Public Law 91-646 was passed by Congress to provide for uniform and equitable treatment of persons displaced from their homes, businesses, or farms by federal and federally assisted programs and to establish uniform and equitable land acquisition policies for federal and federally assisted programs.

## **2.0 ALTERNATIVES**

### **2.1 Alternative A – No Action Alternative:**

Under the No Action Alternative, the Service would not acquire the Price's Dairy parcel. The Price Family is interested in leaving a conservation legacy on this property and have considered various options since the dairy operation was shut down in 1998. If a conservation outcome cannot be accomplished, the owners have indicated they would likely sell the property on the open market. A large residential development or light commercial development would be the most likely land use that could result from an open market sale. In addition, the senior water rights attached to the property would likely be sold to a large municipal entity or developer, potentially resulting in less water flowing through the Middle Rio Grande. This outcome would be expected to further degrade the habitat and water resources of the Middle Rio Grande as well as impact water supply to the agricultural community.

### **2.2 Alternative B – Acquisition Alternative (Preferred Alternative)**

Under Alternative B, the Service would acquire fee title interest in the 570-acre Price's Dairy property and establish it as a new National Wildlife Refuge, the first urban Refuge in the Service's Southwest Region. The Service would also acquire the senior water rights attached to the property. Bernalillo County has pledged \$5 million towards the acquisition of a conservation easement on the property that will ensure public access to the site as part of the County's Open Space Program, contingent on Service acquisition being initiated by September 2012. The Service, working with the County Open Space Program and other potential partners, would develop environmental education and wildlife-oriented outdoor recreation facilities that would be complementary with those of the adjacent Rio Grande Valley State Park. Partners with complementary goals could potentially co-locate environmental education or interpretation facilities on the site. The site would be converted from agricultural hay production to habitats benefitting a variety of native wildlife species, especially those using Rio Grande bosque (riparian forest). The Service will explore restoration designs that include other habitats such as meadows and small wetlands to increase wildlife species diversity using the site.

### **2.3 Comparison of Alternatives**

The likely scenario of housing development occurring on the Price's Dairy site under the no action alternative would contrast markedly with establishment of an urban Refuge under the preferred alternative. As a result many physical, biological, and social factors would be adversely affected under the No Action Alternative, whereas, many physical, biological, and social factors would be maintained or improved under the acquisition alternative. Both alternatives would likely result in increased traffic on 2<sup>nd</sup> Street accessing the property. Under both alternatives

impacts may occur from the Albuquerque Metropolitan Arroyo Flood Control Authority proposal to build a 60-acre floodwater retention basin on the property.

## **2.4 Alternatives Considered But Dismissed From Detailed Analysis**

Some parties have proposed that the Service could acquire interest in the property through a conservation easement, which would be less costly than acquisition of fee title interest.

However, the landowner has not expressed interest in retaining any ownership of the property and no other entity has come forward to pursue acquisition of the underlying fee title interest for conservation purposes.

There are other undeveloped and agricultural parcels in the Albuquerque metro region, but they are not as large, are not available, or are unsuitable for urban National Wildlife Refuge establishment because they are surrounded by industrial or commercial lands. The site's location adjacent to the Rio Grande bosque is a key component of this proposed action.

## **3.0 AFFECTED ENVIRONMENT**

### **3.1 Physical Environment**

#### **3.1.1 Climate Change**

Climate patterns are generally driven by regional to global influences. The existing land use and management at the site does little to sequester carbon and has minimal influence on climate patterns. Predictions for pending climate change for the Southwest include alterations in the precipitation timing and type, earlier snow pack release, and increased temperatures that will shift river hydrographs and stress natural systems.

#### **3.1.2 Air Quality**

Bernalillo County is in attainment for National Ambient Air Quality Standards. A wide variety of emission sources in the Albuquerque metropolitan area affect the air quality. The current farming operation at Price's Dairy may lead to production of emissions by farm vehicles and equipment, application of fertilizers, herbicides, or pesticides, and from blowing dust from plowed fields. These would be localized impacts, each generally restricted to short time periods during the year.

#### **3.1.3 Topography**

The agricultural operation on the property has resulted in the land being precisely leveled to facilitate irrigation water delivery. The only noticeable topographic features are the numerous water delivery or drainage ditches and canals.

#### **3.1.4 Soils**

Farming practices on the property, such as plowing and disking, would expose the soil for some time resulting in greater rates of wind and water erosion compared to lands with permanent vegetation cover. Irrigation would likely add to the amount of soil eroding from the site. It is probable that sediments eroded from farm fields, especially when they are bare of vegetation, would have occasionally washed into small drainages and irrigation structures, and potentially into the Rio Grande.

Typically, soils intensively farmed from many years have altered nutrient and organic matter content when compared to relatively undisturbed soils. Application of fertilizers and/or pesticides may have negatively impacted the native soil biota, which in turn impacts the chemical and physical properties of the soil.

Typical farm tilling practices would have altered the natural water infiltration properties of the soil. Drainage tiles installed 10-15 feet under the farm fields ensured drainage in the fields, and possibly allowed salts to leach through the system so they did not accumulate in the crop rooting zone. These tiles, however, are old and their condition and functionality need to be verified.

### **3.1.5 Surface and Ground Water Quality/Quantity**

There are 200-400 acres of land on the property with senior water rights attached. The property owners are currently working with the New Mexico Office of the State Engineer to quantify the water rights. There is one irrigation well near the northeast corner of the property that is not currently used. The Williams Lateral irrigation canal runs along the western side of the property. The Barr Main Canal runs north to south immediately east of the property. Historically, farming activities on the property may have contributed inputs of pesticides, herbicides, fertilizers, and sediments to the groundwater, or indirectly to the Rio Grande.

### **3.1.6 Flooding**

According to the Albuquerque Metropolitan Arroyo Flood Control Authority (AMAFCA) most of the property is within the area subject to inundation by a 100-year flood event. There are numerous flood control dams and diversions higher in the watershed, all minimizing the chances for a Rio Grande main channel flood events on the property. If flood events were to impact the property they would be rare and probably the result of flash floods occurring in the immediate vicinity of the property. The Riverside Drain runs along the western side of the property. The Barr Interior Drain runs north to south roughly through the center of the property. The Barr Spur Drain runs east to west along the northeast corner of the property.

The AMAFCA has proposed a 60-acre floodwater retention basin on the property as part of their Southeast Valley Drainage and Storm Water Quality Management Plan (Plan). Construction of this facility would increase the probability that litter and pollutants would enter the site via floodwater runoff. The Service has provided AMAFCA written comments on the Plan.

## **3.2 Biological Environment**

### **3.2.1 Vegetation**

The majority of the farm is currently used to grow grass (Fescue) and alfalfa hay in monoculture conditions. Little native vegetation occurs on the property. Sparse trees and shrubs occur along the perimeter of the farm and around the farm buildings on the far eastern part of the property near 2<sup>nd</sup> Street.

### **3.2.2 Species Diversity/Abundance**

Currently, the farm grows grass (Fescue) and alfalfa hay in monoculture conditions. Native plant species diversity and abundance are low. Native species mainly occur in areas outside of the areas normally cultivated (adjacent to the farm fields, along irrigation canals, and along the perimeter of the property).

### 3.2.3 Noxious Weeds and Non-native Plants

A number of non-native plants have been observed on the property but a thorough inventory has not been completed. These include tamarisk (*Tamarix* spp.), Russian olive (*Elaeagnus angustifolia*), Siberian elm (*Ulmus pumila*), tumbleweed or Russian thistle (*Salsola* spp.), and kochia (*Kochia* spp.). Other non-native plant species are likely present given the history of soil disturbance on the tract.

### 3.2.4 Wildlife

The current farm operation on the property supports sandhill cranes, arctic nesting geese, Canada geese, snow geese, Ross's geese, and other waterfowl that feed on the open grasslands and alfalfa fields. Occasionally shorebirds, such as killdeer and black-necked stilt, have been observed. Lack of diversity in habitats results in a wildlife community with relatively low species richness. Bosque habitat, which occurs adjacent to the property to the west, has been studied extensively in the Middle Rio Grande Valley and has been shown to support a very diverse wildlife community (Finch et al 1995).

#### Species of Special Concern

The property is not within any designated critical habitat for endangered or threatened species. The nearby Rio Grande channel is designated critical habitat for the Rio Grande silvery minnow. The nearby cottonwood bosque may provide migrating habitat for southwestern willow flycatchers (Endangered) or yellow-billed cuckoo (Candidate for listing), and habitat for the New Mexico jumping mouse (Candidate for listing).

#### *Southwestern willow flycatcher*

In a one-year study on the Middle Rio Grande from the Bernalillo Bridge to the La Joya State Game Refuge (Hawks Aloft 2010) southwestern willow flycatcher was described as rare during both spring and fall migration, found strictly in densely vegetated habitat near water. No known breeding sites were located near the property during this study; the nearest being approximately 10 miles to the south. Currently, habitat at the property is unsuitable for the species.

#### *Yellow-billed cuckoo*

Yellow-billed cuckoo were uncommon and considered a rare migrant with no evidence of summering in the Middle Rio Grande during one year of a recent study (Hawks Aloft 2010). Habitat at the property is currently unsuitable for the yellow-billed cuckoo.

#### *New Mexico jumping mouse*

The New Mexico jumping mouse occurs in the Middle Rio Grande basin but it occurs in relatively dense riparian vegetation. Habitat at the property is currently unsuitable for the New Mexico jumping mouse.

#### *Rio Grande silvery minnow*

The property is not directly adjacent to the Rio Grande where there is critical habitat designated for the Rio Grande silvery minnow. Withdrawal of irrigation water for the property contributes to reducing stream flow in the Rio Grande, but the amount of water used on the property by itself is minor in terms of overall Rio Grande stream flow.

### **3.3 Human Environment**

#### **3.3.1 Cultural/Archaeological/Historic Resources**

Before the creation of large flood control infrastructure in the Middle Rio Grande Valley much of the property would have been impacted by relatively frequent flood events, making the suitability of the location for archeological sites unlikely. This is especially true in terms of long-term habitation/village sites, which would normally be expected in an area that supported continuous occupation for hundreds of years. Decades of mechanized farming at the site have certainly impacted any archeological resources that were present. Historically the Middle Rio Grande has had extensive agricultural development that is still in evidence by the many small farms in the South Valley. El Camino Real, which ran near or through the property, was considered the official "Royal Road of the Interior" bringing the first colonists to the region beginning in 1598 (<http://www.caminorealcarta.org/>).

#### **3.3.2 Educational/Recreational Opportunities**

Because it is currently a privately owned working farm, no formal education or recreational opportunities are available. Though public use was not promoted, there has been some 'unofficial' use of the property by local citizens hiking or horseback riding. The current owners did not limit this access unless it was resulting in damage to the farm infrastructure or crops.

The Rio Grande Valley State Park is adjacent to the property and a popular area for recreational activities. The nearest sites offering substantial outdoor wildlife education opportunities are the Rio Grande Nature Center and Rio Grande Community Farm (approximately 10 miles to the north). There is little or no exposure to the Service or the National Wildlife Refuge System at those venues. Mountain View Elementary School is located approximately 1 mile north of the property on 2<sup>nd</sup> Street.

#### **3.3.3 Public Access**

Vehicle traffic in the area surrounding the property is mostly from local residents and some small businesses. Current public road traffic patterns are typical of low-density residential and light industrial land uses. Traffic onto the property itself is mostly comprised of Price's Dairy employees, clients, and service people. Access to the property by the public is not encouraged, nor is it controlled. The Middle Rio Grande Conservancy District owns the Barr Drain that runs north-south through the property and the road that runs along it. Public access has not been discouraged or banned on that road and use by pedestrian and horseback riding traffic is not uncommon.

#### **3.3.4 Tax Revenues and Property Values**

The land is currently taxed at an agricultural tax rate. Property values in the immediate area surrounding the property would be influenced by the values of nearby properties, local amenities and infrastructure, and current and future surrounding land uses. If the property was valued as residential property, tax rates would be greatly higher than current agricultural rates.

#### **3.3.5 Land Use**

The property was operated as a dairy from the 1920's to the 1990's and since then has been cultivated and used for alfalfa and grass hay production. Low-density residential development,

light industrial development, a railroad track, and small farms dominate land use in the immediate surrounding area. The property is zoned Residential and Agricultural Zone, Semi-Urban Area, which allows low-density residential development.

The Bernalillo County Board of County Commissioners will have to approve a special use permit or a conditional use permit for the Urban Wildlife Refuge. A site plan that shows building locations and footprints, grading and drainage, vehicular parking and ingress and egress, and utility connections will need to be submitted at the appropriate time after land acquisition but before any public facility is constructed. Adequate road and utility infrastructure will be a condition of land use approval. Public meetings with adjacent residents and area neighborhood associations will also need to be part of this process.

### **3.3.6 Transportation Facilities**

The major road accessing the site is 2<sup>nd</sup> Street which is a 2-lane paved road running along the eastern perimeter of most of the property. Roads along the north and south perimeters are graveled roads mainly providing access to private residences. The New Mexico Rail Runner Express commuter train runs along 2<sup>nd</sup> Street immediately to the east of the property. The nearest stop is at Rio Bravo and 2<sup>nd</sup> Street, 3 miles to the north of the property.

The property is below the flight line for departures and arrivals to runway 3/21 (the southwest runway) at the Albuquerque International Sunport and there is concern that large flocks of birds or even individual large birds (such as geese and cranes) could be a hazard to aircraft operating in the area. Noise from air traffic is noticeable when runway 3/21 is in use. Airport officials have been consulted during the scoping process for this project and have indicated they are concerned about noise complaints should Price's Dairy be developed for residential use.

### **3.3.7 Quality of Life**

Nearby residents derive quality of life values from the property by being able to enjoy the relative quiet and open vistas of the undeveloped property, and observations of wildlife including flocks of geese and cranes. Community cohesion is unaffected by the property.

### **3.3.8 Residents on the Property**

There are five residences on the property. The farm manager lives in one residence. People not directly associated with the operation of the property occupy others. Formal leases are not in place for the tenants. One tenant lives in a trailer that he owns on the east side of 2<sup>nd</sup> street at the far eastern side of the property.

### **3.3.9 Human Health/Safety**

The property currently has minor effects on human health and safety in the form of dust produced during farming operations or when fields are not covered in vegetation.

### **3.3.10 Aesthetics and Scenery**

Nearby residents currently are able to enjoy the open vistas afforded by the property and the opportunity to view wildlife on the property.

### **3.3.11 Noise**

Currently noise issues associated with the farming operations would be most noticeable with operation of farm machinery to cultivate and harvest hay. Because the property is undeveloped, the immediate area would have fewer issues with traffic noise than more developed areas.

## **4.0 ENVIRONMENTAL CONSEQUENCES**

### **4.1 Physical Environment**

#### **4.1.1 Climate Change**

##### **No Action Alternative**

If the property is not acquired for creation of a Refuge the opportunities to sequester carbon and mitigate climate change by restoring permanent native vegetation cover will be lost due to projected development.

##### **Acquisition Alternative (Preferred Alternative)**

Overall, acquisition of the property will have little impact on climate change. Influences on climate from actions on the property itself are negligible. However, once restoration occurs, the trees and other permanent vegetation on the site would contribute to reducing emission impacts to the climate and air quality by sequestering small amounts of carbon. Acquisition and management of the site as a Refuge would also reduce emissions from use of farming related fuels and other petroleum products in the long-term. There will be increased vehicle traffic in the immediate area from visitors to the Refuge but by providing an outdoor experience close to a large urban population the effect might be to reduce overall emissions.

Predictions for pending climate change for the Southwest include alterations in the precipitation timing and type, earlier snow pack release, and increased temperatures that will shift river hydrographs and stress natural systems. Protecting and restoring native vegetation on the site may help mitigate or buffer against climate change impacts to species or ecosystems by increasing the ecological integrity of the native habitat along the Rio Grande bosque. Designing restoration with low long-term water use may also provide minor mitigation for reduced flows in the system from unusually dry years and/or the declining moisture conditions predicted by climate change models. If climate changes happen as predicted aquatic, wetland, and riparian ecosystems will become more stressed and degraded in the future. Utilizing water rights in excess of that needed for restoration for ecological purposes (such as maintaining instream flow or for wetland restoration and maintenance) in the other parts of the Middle Rio Grande ecosystem will be evaluated. This may help mitigate climate change impacts in a minor way, as the property water rights would be a minor contribution compared to what is needed to enhance integrity of the system.

#### **4.1.2 Air Quality**

##### **No Action Alternative**

If the property is not acquired as a Refuge, trends in air quality would be expected to continue as they have historically. If the site is developed in the future there would probably be negative effects from increases in the degradation of air quality in general. Development brings with it pollution due to long-term increases in traffic and construction-related emissions.

### **Acquisition Alternative (Preferred Alternative)**

The proposed action may result in similar impacts from the current operation of the farm from short-term use of mechanical equipment to restore native vegetation or to construct facilities. These temporary impacts to air quality from dust and emissions produced by heavy equipment would be minimal and short-term.

Projected annual Refuge use levels are difficult to project at this time; however, we predict a minor increase in vehicle emissions on and near the Refuge in the long-term from visitors' vehicles. The contribution to cumulative local and regional air quality effects would likely be offset to a large degree by precluding development on the property. There would be virtually no localized increases on the Refuge, compared to the current off Refuge contributions to pollutant levels and likely increases in air emissions from land development in the Valley during the foreseeable future. The benefits of restoring the Refuge to permanent natural vegetation would offset the predicted increase in vehicle emissions associated with creating a Refuge. Consequently, we conclude that the emissions from sources on the Refuge would not cause cumulative effects on air quality.

#### **4.1.3 Topography**

##### **No Action Alternative**

If the property is not acquired as a Refuge minor changes to topography would continue as they have with the farming operation. Development in the future would result in alterations in topography typically associated with construction and utilities installation.

##### **Acquisition Alternative (Preferred Alternative)**

If the property is acquired as a Refuge, the topography of the site may be temporarily or slightly altered. There are plans to build facilities at the site which might require excavation and there may be a need to demolish existing structures if they are unsafe or unusable. These impacts would be temporary and short-term.

To facilitate restoration of native vegetation there may be a need to restore or mimic natural topographic variation that would have been present prior to cultivation of the site. Existing irrigation ditches and diversions might also be altered to facilitate water delivery needed for vegetation restorations. Small depression or berms for wetlands might be created and small mounds might be created in scattered locations to provide for elevated hiking trails and some variation in constructed habitats.

#### **4.1.4 Soils**

##### **No Action Alternative**

If the property is not acquired, erosion, siltation, and deposition rates will remain as they currently are in the short-term. Future development would be expected to increase erosion, siltation, and deposition rates, at least until the development was completed and landscaping matured. Soil quality will remain similar under farming practices or possibly worsen if the site is developed for residential use.

Typical farm tilling practices would have altered the natural water infiltration properties of the soil and this would not be expected to change as long as the property remains an active farm. If the property is developed, infiltration rates will be greatly reduced by soil compaction associated with construction and the much greater proportion of impermeable surface associated with developed areas.

#### **Acquisition Alternative (Preferred Alternative)**

The restoration activities planned may require the use of heavy machinery to grade the property, prepare the soil, plant vegetation, and maintain habitats. This may result in erosion, siltation, and deposition rates similar to current levels in the short-term. Once native vegetation becomes established and matures, there would be less exposed soil and far less irrigation need. This would be expected to reduce erosion, siltation, and deposition to well below current levels on and off-site.

With acquisition and restoration, we would minimize the use of fertilizers, herbicides, and pesticides to minimum levels needed to establish native vegetation and control non-native vegetation. Once native vegetation becomes established and matures, soil quality may gradually increase.

With acquisition and restoration to native vegetation soil properties would begin to return to natural conditions resulting in more natural water infiltration rates over the long-term. The subsurface tile drainage system may limit the ability to maintain saturated soil conditions which may be needed to facilitate wetland and bosque vegetation development in some areas. The condition of the tile drainage system, however, needs to be fully understood in order to determine its impact on saturated soils. It may be necessary to disable this drainage system to support vegetation restoration efforts, or focus restoration of wetlands vegetation to places less affected by the drainage system. If the system is disabled, it would be expected to result in raised water table levels in some locations. The on-site and off-site effects of potentially raising the local water table would be considered in a subsequent site-specific restoration plan.

#### **4.1.5 Surface and Ground Water Quality/Quantity**

##### **No Action Alternative**

If the property is not acquired as a Refuge, inputs of pesticides, herbicides, fertilizers, and sediments would remain as they are currently in the short-term. A large quantity of water would be diverted from the river for irrigation purposes. If the property is developed, it would probably result in unquantifiable, but greater levels and types of pollutants associated with runoff from urban development. Reduction in return flow to the Rio Grande may be the result if eventual development is dense or if water rights are sold for municipal use. This outcome would be expected to further degrade the habitat and water resources of the Middle Rio Grande as well as impact water supply to the agricultural community.

##### **Acquisition Alternative (Preferred Alternative)**

Restoration to native species on all or a majority of the property would result in few or no negative impacts to surface or ground water quality in the long term with the phasing out of the farming program and much less use of herbicides. Diversion and use of water from the Rio Grande for irrigation would likely be much lower than required under use of the property for

agriculture. Habitat restoration of former grazing and farming lands requires irrigation for the first few years. This type of water management typically uses less water than standard farming practices and we anticipate that approximately 30 percent of the senior water right may be available to assist with habitat restoration efforts in other parts of the Middle Rio Grande Ecosystem. The Region has initiated exploratory discussions with the Interstate Stream Commission and Bureau of Reclamation to pursue that outcome. If possible this would have long-term positive environmental benefits. Designing restoration with low long-term water use may help mitigate for reduced flows in the Middle Rio Grande ecosystem from unusually dry years and/or the declining moisture conditions predicted by climate change models. However, the amount of water the service could contribute to instream flow in Rio Grande is negligible compared to the estimated 30,000 acre-feet needed to maintain hydrological integrity of the river.

The Albuquerque Metropolitan Arroyo Flood Control Authority (AMAFCA) has proposed a 60-acre floodwater retention basin on the property as part of their Southeast Valley Drainage and Storm Water Quality Management Plan. Construction of this facility would increase the probability that litter and chemical pollutants would enter the site via floodwater runoff. The Service is working with AMAFCA to explore smaller or offsite alternatives with fewer management challenges should the site become a Refuge.

#### **4.1.6 Flooding**

##### **No Action Alternative**

In the long-term increases in the amount of impermeable surfaces associated with development could contribute to flooding in the immediate area. If the AMAFCA floodwater retention basin were built onsite, the property would be holding runoff from part of the South Valley if a 100-year flood event occurred.

##### **Acquisition Alternative (Preferred Alternative)**

The Refuge alone would not contribute to increased flooding. If the AMAFCA floodwater retention basin were built onsite, the Refuge would be holding runoff from part of the South Valley if a 100-year flood event occurred.

#### **4.2 Biological Environment**

##### **4.2.1 Vegetation**

##### **No Action Alternative**

In the short-term there would be no changes in vegetation cover while the property is still managed as a farm. If the property is developed, it would reduce the overall amount of vegetation cover.

##### **Acquisition Alternative (Preferred Alternative)**

The Service intends to restore parts of this property west of the planned buildings along 2<sup>nd</sup> Street to include a diverse mix of vegetation types native to the area. This could include the bosque riparian cover type that existed in the Middle Rio Grande prior to European settlement in the 1600's, floodplain savanna, seasonal wetlands, and moist meadows, all providing a window into the historic conditions and diversity of wildlife present. Once restoration occurs, the trees

and other permanent vegetation on the site would contribute to reducing emission impacts to the climate and air quality by sequestering small amounts of carbon.

#### **4.2.2 Species Diversity/Abundance**

##### **No Action Alternative**

In the short-term species diversity and abundance would remain similar to current levels. If the property were sold for development species diversity and abundance would be reduced.

##### **Acquisition Alternative (Preferred Alternative)**

Over time habitat at the site would change from grass and alfalfa hay meadows to a mix of native habitats ranging from bosque woodlands, open savanna, mesic meadows, and seasonal wetlands. This would greatly increase the plant and animal species diversity and alter the abundance of individual species. This will likely reduce, but not totally preclude, use by sandhill cranes, arctic nesting geese, Canada geese, and other waterfowl that feed on the open grasslands and alfalfa fields maintained by the current hay farming operation. It will benefit and increase use by neotropical migrants, raptors, and other native wildlife species that prefer native habitats.

#### **4.2.3 Noxious Weeds and Non-Native Plants**

##### **No Action Alternative**

In the short-term abundance of noxious weeds and non-native plants would remain similar to current levels. If the property were sold for development this would be expected to increase the abundance of noxious weeds and non-native species because of the ground disturbance associated with development, and lack of weed control once farming is stopped.

##### **Acquisition Alternative (Preferred Alternative)**

A number of noxious weeds and many non-native plant species often invade farm land if it goes fallow. Refuge habitat management may involve a gradual phasing out of farming so that restoration treatments and planting can be most effective and minimize the opportunity for invasive species to become established. Even with our best efforts, we anticipate that we would have to control some noxious weeds and non-native species on the site. Once native vegetation is established, the level of noxious weed and non-native species control needed would likely decrease but some control may always be necessary.

#### **4.2.4 Wildlife**

##### **No Action Alternative**

If the property is not acquired wildlife present on the property would remain similar to current conditions. In the long-term, development of the property would eliminate habitat for all but the broad generalist species that thrive in developed landscapes.

##### **Acquisition Alternative (Preferred Alternative)**

With acquisition and restoration of native vegetation direct and indirect positive impacts will occur for a variety of wildlife. Suitable migratory habitat may be created for the southwestern willow flycatcher and yellow-billed cuckoo. Suitable habitat may be created for the New Mexico jumping mouse. There could be minor positive benefits to Rio Grande silvery minnow if we are able to use excess irrigation water to improve habitat conditions through restoration efforts off-site, but within critical habitat for the species. A greater diversity of wildlife will occur on the

property than that found under current monoculture farming conditions. Adding a large block of land with restored native vegetation to the existing native cover along the Rio Grande bosque should result in greater resilience of the local ecosystem and the associated wildlife community.

### **4.3 Human Environment**

#### **4.3.1 Cultural/Archaeological/Historic Resources**

##### **No Action Alternative**

There are no expected changes from existing conditions with this alternative in the short-term. In the long-term most types of private development would not protect cultural, archeological, or historical resources, if any still exist on the site.

##### **Acquisition Alternative (Preferred Alternative)**

In the unlikely event that cultural, archaeological, or historic resources still exist on the property the Service would manage and protect those resources in accordance with federal and state regulations and policy. The Service would recognize the documented presence of the El Camino Real on, or near the site, as well as the history of the Middle Rio Grande culture, through interpretive activities.

#### **4.3.2 Educational/Recreational Opportunities**

##### **No Action Alternative**

There are no expected changes from existing conditions with this alternative as passive recreation activities such as hiking, biking, and horseback riding currently occur, but are not promoted, and these would be expected to continue in the short-term. Currently there are no formal educational opportunities and this would be expected to remain the same in the short-term.

##### **Acquisition Alternative (Preferred Alternative)**

If the property is acquired and managed for wildlife habitats there will be extensive opportunities for wildlife-dependent recreational uses, including environmental education, interpretation, wildlife observation, and photography. The easement planned for purchase by Bernalillo County would ensure that open-space recreation will occur. An environmental education and interpretation program could be developed to advance the mission of the Service and its partners. Habitat restoration areas could serve as demonstration sites for the benefit of other landowners interested in improving habitats on their lands. Partners may be interested in doing joint “habitat improvement demonstration days” or similar events. Establishing hiking trails at the Refuge would facilitate environmental education, wildlife observation, photography, and wildlife interpretation. If horseback or bicycle access to the bosque on the Rio Grande Valley State Park is not available nearby, the Service will evaluate the compatibility of providing this access along with the other priority Refuge uses. Trail use often increases plant root exposure, soils erosion and compaction, and trampling of plants. We would expect and encourage Refuge visitors to stay on appropriately designated trails, thus minimizing negative impacts.

#### **4.3.3 Public Access**

##### **No Action Alternative**

There will be no change in public access opportunities in the short-term. In the long-term development of the property could curtail public access depending on the type of development.

#### **Acquisition Alternative (Preferred Alternative)**

Under this alternative public access opportunities will be greatly enhanced. The easement planned for purchase by Bernalillo County would ensure public access to the site. There will be more vehicle traffic using local roads as access to the Refuge and more human use on the property that will be visible to area residents in the immediate area.

#### **4.3.4 Tax Revenues and Property Values**

##### **No Action Alternative**

In the short-term this action would have no impact on tax revenues and property values. Depending on the type of development that could occur, property values and expected tax revenue could increase.

##### **Acquisition Alternative (Preferred Alternative)**

While land owned by the U.S. Government is not taxable by state or local authorities, the federal government has a program to compensate local governments for loss of tax revenues. The NWR System has typically provided annual payments, under the Refuge Revenue Sharing Act, in lieu of taxes to local governments. The amount of the payment is dependent on Congressional budget appropriations. As part of the current budget process, there are proposals that this program be eliminated.

With development of a major visitor use program on the proposed Refuge, there are opportunities for benefits and diversification of the local economy in the South Valley. Enhancing the nature tourism economic sector in this industrialized area of the county may provide additional employment opportunities and generate additional monetary benefits to the local economy. Refuges in "gateway communities" like Albuquerque have been studied in other parts of the country and have reported economic benefits to their local communities through visitation and expenditures of the Refuges for salaries, goods, and services. Protected areas and parks in urban areas generally increase the property values in the nearby area.

#### **4.3.5 Land Use**

##### **No Action Alternative**

In the short-term there will be no changes in land use under this alternative. If the property is sold and developed there will be an increase in housing and/or business development and the associated infrastructure.

##### **Acquisition Alternative (Preferred Alternative)**

Under the acquisition alternative land use would change from an agricultural production purpose to a recreational and educational purpose. Changes in the vegetation at the property and the numbers of people accessing the property would be the most notable changes on the property associated with that change.

#### **4.3.6 Transportation Facilities**

##### **No Action Alternative**

Short-term impacts from or associated with transportation facilities would remain similar to current conditions. If the property is developed there would likely be an increase in traffic using 2nd Street into the neighborhood.

##### **Acquisition Alternative (Preferred Alternative)**

There will be increased vehicle traffic using 2<sup>nd</sup> Street into the neighborhoods immediately adjacent to the Refuge. This could be mitigated if Desert Road from Broadway to 2nd Street is used as a supplemental access route to the Refuge. The Service will work with Bernalillo County Publics Works Division to design safe and efficient access to the facility and will consider effects on road conditions and maintenance, traffic quantity and patterns, and neighboring residential areas and will attempt to minimize negative impacts through signage or road upgrades. A Traffic Impact Analysis prepared by an experienced and licensed traffic engineer may be required to identify any necessary road improvements.

Airport officials have been consulted during the scoping process for this project and have indicated they are concerned about noise complaints should Price's Dairy be developed for residential use and that a possibility of aircraft bird strike hazards associated with the property are a concern. The proposed action would likely decrease the probability or frequency of both issues.

#### **4.3.7 Quality of Life**

As land development continues in the urban area, the number of places to enjoy wildlife viewing and natural habitats will continue to diminish and be out of reach for many citizens. Refuge lands may become even more important to local citizens in this regard. The presence of a site to experience compatible natural open space recreational activities, as well as environmental learning opportunities could enhance the overall quality of life and community cohesion in the South Valley, Albuquerque, Bernalillo County, and nearby metropolitan counties of Valencia and Sandoval. It could also provide employment opportunities and generate additional monetary benefits to the local economy both directly and indirectly.

#### **4.3.8 Residents on the Property**

##### **No Action Alternative**

In the short-term there would be no impact to tenants on the property. If the property is sold for development, current tenants would most likely be forced to relocate.

##### **Acquisition Alternative (Preferred Alternative)**

The Service may allow some tenants to stay on the property in the short-term to help continue a security presence on the property. In the long-term, current tenants may be forced to relocate. The Service will assess the eligibility for relocation assistance for tenants on the property under the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (Public Law 91-646). Public Law 91-646 was passed by Congress to provide for uniform and equitable treatment of persons displaced from their homes, businesses, or farms by federal and federally assisted programs and to establish uniform and equitable land acquisition policies for federal and

federally assisted programs. The Service is required to assist eligible displaced tenants with finding comparable safe and sanitary housing.

#### **4.3.9 Human Health/Safety**

##### **No Action Alternative**

In the short-term there would be no changes to human health and safety.

##### **Acquisition Alternative (Preferred Alternative)**

There could be a positive impact on human health due to a change from a dust-producing farming operation to a permanent native vegetative cover including trees that will sequester carbon. The presence of an open space recreation site may encourage residents and visitors to exercise on the site. Every consideration will be made to ensure the safety of Refuge visitors.

#### **4.3.10 Aesthetics and Scenery**

##### **No Action Alternative**

In the short-term there would be no changes to aesthetics and scenery. If the property is sold and developed, the aesthetics and scenery would be changed to an industrial, commercial, or residential character.

##### **Acquisition Alternative (Preferred Alternative)**

Nearby residents and visitors would enjoy the open vistas of the proposed Refuge and opportunities to visit the site for wildlife viewing experiences.

#### **4.3.11 Noise**

##### **No Action Alternative**

Noise from the property itself would remain similar to current levels with intermittent noise from farm machinery. In the property is developed in the long-term noise levels or constancy would be expected to increase.

##### **Acquisition Alternative (Preferred Alternative)**

Nearby residents would enjoy the quiet provided by the undeveloped Refuge. At the beginning of restoration projects there would be noise from various kinds of machinery. There would likely be an increase in noise from vehicles, especially school buses, coming to the Refuge but this would be a moderate increase when considered in the overall noise levels from the surrounding area.

Since the site is under the flight path for the southwest runway of the Albuquerque International Sunport, aircraft periodically overfly the property approximately 5000 feet above ground level (J. Dickman – pers. comm.). A wide variety of background noise is characteristic of an urban Refuge experience and the Service is confident that habitats and visitor facilities can be designed to provide a high quality outdoor experience.

### **4.4 Assessment of Cumulative Effects by Alternative**

#### **4.4.1 Alternative A – No Action Alternative:**

This alternative would not address the Service's goal of connecting urban citizens to the outdoors. In the short-term the property will continue to operate as it has for the recent past. In

the long-term the property would likely be sold for residential or light industrial development and the senior water rights attached to the property sold to a large municipal entity or developer, potentially resulting in less water flowing through the Middle Rio Grande. In both cases, the No Action alternative would be expected to further degrade the habitat and water resources. The proposed AMAFCA Southeast Valley Drainage and Storm Water Quality Management Project would construct flood control structures on the site and in the neighborhood.

#### **4.4.2 Alternative B – Acquisition Alternative (Preferred Alternative)**

The Proposed Alternative is expected to lead to an increase in opportunities for a large urban population to take part in meaningful outdoor experiences in a relatively natural setting. This is expected to help meet the Service's goal of connecting urban populations to the outdoors and building broader support for conservation. Additionally, implementation of the Proposed Action is expected to improve the conditions for fish and wildlife and its benefits will be additive to other conservation work occurring along the Middle Rio Grande Ecosystem. There are numerous agencies and organizations involved in restoration of the nearby bosque, including the City of Albuquerque, New Mexico State Parks, New Mexico State Land Office, Bernalillo County, the Army Corps of Engineers, and others. The floodwater control efforts proposed by the Albuquerque Metropolitan Arroyo and Flood Control Authority include a number of retention basins in the local area.

The Service is not aware of any past, present or future planned actions that would result in a significant cumulative impact when added to the Refuge's proposed action, as outlined in Alternative B. The adverse direct and indirect effects of the proposed action on air, water, soil, habitat, wildlife, aesthetic/visual resources, and wilderness values are expected to be minor and short-term. The benefits to long-term ecosystem health that this riparian restoration project could accomplish far outweigh any of the short-term adverse impacts discussed in this document.

#### **4.5 Environmental Justice**

None of the alternatives described in this EA will disproportionately place any adverse environmental, economic, social, or health impacts on minority and low income populations. Implementation of the proposed action is anticipated to benefit the environment and people in the surrounding communities. Some neighborhood residents may believe the Refuge would contribute to improvement in environmental justice over the current situation of industrial land uses in their neighborhood.

#### **4.6 Indian Trust Assets**

No Indian Trust Assets are known from the property. There are no reservations or ceded lands present. Because resources are not believed to be present, no impacts are anticipated to result from implementation of either alternative described in the EA. The Service has contacted the Isleta Pueblo located south of the proposed Refuge regarding the potential acquisition.

#### **4.7 Unavoidable Adverse Effects**

Both alternatives would likely increase traffic using 2<sup>nd</sup> Street into the neighborhood. This could be mitigated if Desert Road from Broadway to 2nd Street is used as a supplemental access route to the Refuge.

#### 4.8 Irreversible and Irretrievable Commitment of Resources

The no action alternative would most likely result in a large commitment of nonrenewable resources associated with eventual development of the site. The acquisition alternative and planned restoration project implementation would require the irretrievable commitment of fossil fuels (diesel and gasoline), oils, and lubricants used by heavy equipment and vehicles. This would be minimal in the long-term compared to eventual development of the site.

**Table 1. Summary of Environmental Consequences by Alternative**

<b>Resource</b>	<b>No action alternative</b>	<b>Acquisition Alternative (Preferred Alternative)</b>
Climate Change	Minor long- term negative impacts	Minor long-term beneficial impacts
Air Quality	Minor long- term adverse impacts	Minor long-term beneficial impacts
Topography	Negligible impacts	Negligible short-term impacts
Soils	Minor short-term adverse impacts, moderate long-term adverse impacts	Minor short-term adverse impacts, moderate long-term beneficial impacts
Surface and Ground Water Quality/Quantity	Minor short-term adverse impacts, moderate long-term adverse impacts	Minor short-term adverse impacts, moderate long-term beneficial impacts
Flooding	Minor short-term adverse impacts, moderate long-term adverse impacts	Moderate long-term beneficial impacts
Vegetation	Negligible short-term adverse impacts, moderate long-term adverse impacts	Moderate long-term beneficial impacts
Species Diversity/Abundance	Negligible short-term impacts, moderate long-term adverse impacts	Moderate long-term beneficial impacts
Noxious Weeds and Non-native Plants	Negligible short-term impacts, moderate long-term adverse impacts	Moderate long-term beneficial impacts
Wildlife	Negligible short-term impacts, moderate long-term adverse impacts	Moderate long-term beneficial impacts
Cultural/Archeological/Historic Resources	Negligible short-term impacts, moderate long-term adverse impacts	Moderate long-term beneficial impacts

Education/Recreational Opportunities	Negligible short-term impacts, moderate long-term adverse impacts	Moderate long-term beneficial impacts
Public Access	Negligible short-term impacts, moderate long-term adverse impacts	Moderate long-term beneficial impacts
Taxes and Property Values	Negligible short-term impacts, moderate long-term adverse impacts	Moderate long-term beneficial impacts
Land Use	Negligible short-term impacts, moderate long-term adverse impacts	Moderate long-term beneficial impacts
Transportation Facilities	Negligible short-term impacts, moderate long-term adverse impacts	Minor long-term negative impacts
Quality of Life	Negligible short-term impacts, moderate long-term adverse impacts	Moderate long-term beneficial impacts
Residents on the Property	Negligible short-term impacts, moderate long-term adverse impacts	Minor short-term adverse impacts, moderate long-term adverse impacts
Human Health/Safety	Negligible short-term impacts, moderate long-term adverse impacts	Moderate long-term beneficial impacts
Aesthetics and Scenery	Negligible short-term impacts, moderate long-term adverse impacts	Moderate long-term beneficial impacts
Noise	Negligible short-term impacts, moderate long-term adverse impacts	Minor short-term adverse impacts, negligible long-term adverse impacts

## Definition of Terms

### Impact Type

**Beneficial impacts** are those resulting from management actions that maintain or enhance the quality and/or quantity of identified resources.

**Adverse impacts** are those resulting from management actions that degrade the quality and/or quantity of identified resources.

### Duration of Impacts

**Short-term** impacts affect identified resources; they occur during implementation of the action but last no longer.

**Long-term** impacts affect identified resources; they occur during implementation of the action and are expected to persist for several years or longer.

### Intensity of Impact

**Negligible impacts** result from actions that can be reasonably expected to have no effect on identified resources at the identified scale.

**Minor impacts** result from a specified management action that can be reasonably expected to have detectable though limited effects on resources at the identified scale.

**Moderate impacts** result from a specified action that can be reasonably expected to have apparent and detectable effects on identified resources at the identified scale.

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## **5.0 CONSULTATION, COORDINATION, & DOCUMENT PREPARATION**

Document prepared by the Divisions of Planning, Water Resources, and Visitor Services, Southwest Region, U.S. Fish and Wildlife Service, Albuquerque, NM

### **5.1 Agencies and Organizations Consulted in the Preparation of this Document**

Albuquerque International Sunport  
Albuquerque Metropolitan Arroyo Flood Control Authority  
American Rivers  
Amigos Bravos  
Army Corp of Engineers  
Bernalillo County  
Bureau of Reclamation  
Camino Real Trail Association  
City of Albuquerque  
Ciudad Soil and Water Conservation District  
Conservation Voters NM  
Environment NM  
Environmental Education Association of NM  
Friends of Bosque del Apache  
Intermountain West Joint Venture  
Middle Rio Grande Conservancy District  
Middle Rio Grande Endangered Species Collaborative Program  
Mountain View Neighborhood Association  
New Mexico State University  
NM Audubon  
NM Department of Game and Fish  
NM Energy Minerals and Natural Resource Department  
NM Environmental Department  
NM Land Office  
NM Office of the State Engineer  
NM State Parks  
NM State Senate  
NM Wildlife Federation  
Quiet Waters  
Rio Grande Agricultural Land Trust  
Rio Grande Civitan Club  
Rio Grande Community Development Corporation  
Rio Grande Community Farm  
Rio Grande High School  
South Valley Civitan Club  
The Nature Conservancy  
Trust for Public Land  
U.S. Department of Agriculture - Natural Resources Conservation Service  
University of NM  
Whitfield Wildlife Conservation Area

## 6.0 GLOSSARY OF TERMS AND ABBREVIATIONS USED

**100-year flood event:** A flood with a 1% probability of occurring in any given year.

**Alternatives:** Different sets of objectives and strategies or means of achieving refuge purposes and goals, helping fulfill the Refuge System mission, and resolving issues. A reasonable way to fix an identified problem or satisfy a stated need [40 CFR 1500.2 (cf. “management alternative”)].

**Anadromous fish:** fish species that ascend rivers from the sea for breeding, such as Chinook salmon.

**Bernalillo County’s Open Space Program:** Lands acquired and managed by Bernalillo County to conserve natural and cultural resources, and provide opportunities for education and recreation and to shape the urban environment. The land is managed to benefit people, plants and wildlife by protecting and enhancing viewsheds, water resources, wildlife habitat, cultural/historical sites, and prime agricultural land; and providing resource-based recreation and environmental education.

**Biological Integrity:** Biotic composition, structure and functioning at genetic, organism and community levels comparable with historic conditions, including the natural biological processes that shape genomes, organisms and communities.

**Bosque:** Spanish word meaning forest

**Candidate species/Candidate for listing:** Species for which there is sufficient information on file about their biological vulnerability and threats to propose listing them as threatened or endangered.

**Compatible Use:** A wildlife-dependent recreational use, or any other proposed or existing use on a refuge that will not materially interfere with or detract from the purposes of the refuge or the National Wildlife Refuge System mission.

**Compatibility Determination:** A document that assesses whether or not a use is compatible with the Refuge purpose.

**Comprehensive Conservation Plan:** A document that describes the desired future conditions of a refuge or planning unit and provides long-range guidance and management direction to achieve the purposes of the refuge; helps fulfill the mission of the Refuge System; maintains and, where appropriate, restores the ecological integrity of each refuge and the Refuge System; helps achieve the goals of the National Wilderness Preservation System; and meets other mandates.

**Conceptual Management Plan:** An overview of how the land will be managed until a Comprehensive Conservation Plan (CCP) for the refuge is completed. It does not provide extensive detail related to management or show exactly where public use facilities would be located.

**Conservation:** Managing natural resources to prevent loss or waste, management actions may include preservation, restoration, and enhancement.

**Conservation easement:** A non-possessory interest in real property owned by another imposing limitations or affirmative obligations with the purpose of returning or protecting the property’s conservation values.

**Cooperative agreement:** A legal instrument reflecting a relationship between the Federal Government and a recipient when the principle purpose is to fund a project to support or stimulate activities that are not for the direct benefit or use of the Federal government but instead for a public purpose that the government participates substantially in.

**Corridor:** Areas in the landscape that contain and connect natural areas, open spaces and scenic or other resources. They often lie along streams, rivers or other natural features.

**Cultural Resources:** The collective evidence of the past activities and accomplishments of people such as the remains of sites, structures, or objects used by people in the past; typically greater than 50 years old.

**Designated critical habitat:** A specific geographic area(s) that is essential for the conservation of a threatened or endangered species and that may require special management and protection.

**Endangered Species:** A plant or animal species listed under the Endangered Species Act that is in danger of extinction throughout all or a significant portion of its range.

**Enhance:** increasing the level or values provided by the action.

**Environmental Assessment:** A systematic analysis to determine if proposed Federal actions would result in a “significant effect on the quality of the human environment” thereby requiring either the preparation of an environmental impact statement (EIS) or a determination of a “Finding of No Significant Impact.”

**Environmental education:** Curriculum-based education aimed at producing a citizenry that is knowledgeable about the environment and its associated problems, aware of how to help solve those problems, and motivated to work toward solving them.

**Federal land:** Public land owned by the Federal Government, including national forests, national parks, and national wildlife refuges.

**Fee-title interest:** The acquisition of most or all of the rights to a tract of land; a total transfer of property rights with the formal conveyance of a title. While a fee-title acquisition involves most rights to a property, certain rights may be reserved or not purchased, including water rights, mineral rights, or use reservation (e.g., the ability to continue using the land for a specified time period, such as the remainder of the owner’s life).

**Finding of No Significant Impact (FONSI):** Supported by an environmental assessment, a document that briefly presents why a Federal action will have no significant effect on the human environment, and for which an environmental impact statement, therefore, will not be prepared [40 CFR 1508.13].

**Floodwater retention basin:** An artificial basin that can temporarily hold a set amount of water while slowly draining to another location.

**Groundwater:** Water located beneath the ground surface in soil pore spaces and in the fractures of rock formations.

**Historic floodplain:** The area along a river influenced by periodic floods before flood control structures were created on the river system.

**Interpretation:** A process that aims to reveal meanings and relationships through the use of original objects by firsthand experience of illustrative media rather than simply to communicate factual information. It typically involves visitor observation of on-site presentations by expert guides about biological, ecological, or cultural topics pertinent to the site or the Refuge system in general.

**Invasive Plant Species:** A non-native plant to the ecosystem that lacks natural controls and tends to aggressively dominate the plant community, often forming extensive mono-cultures

**Land Protection Plan (LPP):** A document that identifies and prioritizes lands for potential Service acquisition from willing landowners, and describes other methods of providing protection.

**Memorandum of Agreement:** A document written between parties to cooperatively work together on an agreed upon project or meet an agreed upon objective.

**Migrating neotropical birds:** Birds that breed in Canada and the United States during the Northern Hemispheric summer and spend the Northern Hemispheric winter in Mexico, Central America, South America or the Caribbean Islands.

**National Environmental Policy Act of 1969 (NEPA):** Requires all Federal agencies to examine the environmental impacts of their actions, incorporate environmental information, and use public participation in planning and implementing environmental actions

**National Wildlife Refuge:** A designated area of land or water or an interest in land or water within the Refuge System, such as refuges, wildlife management areas, waterfowl production areas and other areas under Service jurisdiction for the protection and conservation of fish and wildlife and plant resources.

**National Wildlife Refuge System:** All lands, waters and interests therein administered by the U.S. Fish and Wildlife Service as wildlife refuges, wildlife ranges, wildlife management areas, waterfowl production areas and other areas for the protection and conservation of fish, wildlife and plant resources.

**Native plant:** A plant that has grown in the region since the last glaciation, and occurred here before European settlement.

**Non-native species:** A plant or animal species not native to the area and introduced intentionally or unintentionally.

**Non-priority public use:** Any use other than a compatible wildlife-dependent recreational use.

**Partnership:** A contract or agreement among two or more individuals, groups of individuals, organizations, or agencies, in which each agrees to furnish capital or some service in kind (e.g., labor) for a mutually beneficial enterprise.

**Priority Public Use:** Wildlife-dependent recreational uses involving hunting, fishing wildlife observation and photography, and environmental education and interpretation which receive priority consideration in refuge planning and management.

**Public involvement:** Offering an opportunity to interested individuals and organizations potentially affected by actions or policies to become informed and provide input. Public input is thoroughly studied and given thoughtful consideration in shaping decisions about managing refuges.

**Purposes of the Refuge:** “The purposes specified in or derived from the law, proclamation, executive order, agreement, public land order, donation document, or administrative memorandum establishing, authorizing, or expanding a refuge, refuge unit, or refuge subunit.” (601 FW 1)

**Refuge Revenue Sharing:** Compensation to local governments for foregone tax revenues from land acquired by the Service. The amount of the annual payment depends on the final Congressional budget appropriations for the Service for that year.

**Restoration:** recreating environmental conditions similar those when there was less human influence on the landscape. A goal of recreating Pre-European settlement conditions is not considered attainable in the Middle Rio Grande Valley.

**Riparian:** Of or relating to land lying immediately adjacent to a water body and having specific characteristics of that area, such as vegetation influenced by that water body.

**Scoping:** A process for identifying the “scope of issues” to be addressed in planning refuge activities.

**Species of special concern:** A species or population which warrants special protection, recognition, or consideration because it has an inherent significant vulnerability to habitat modification, environmental alteration, human disturbance, or substantial human exploration which, in the foreseeable future, may result in its becoming threatened.

**Surface water:** Water collecting on the ground or in a stream, river, lake, wetland or ocean.

**Urban refuge:** Acquired lands and waters in or adjacent to metropolitan statistical areas (over 100,000 people) to protect fish and wildlife resources and habitats that will provide the public wildlife-oriented recreation, education, and interpretation opportunities.

**Water table:** The level at which the subsurface materials that are saturated with groundwater in a given vicinity.

**Wetland:** Areas such as lakes, marshes, ponds, swamps, or streams that are inundated by surface or groundwater long enough to support plants and animals that require saturated or seasonally saturated soils.

**Wildfire:** Unplanned ignition of a wildland fire (such as a fire caused by lightning, volcanoes, unauthorized and accidental human-caused fires) and escaped prescribed fires.

**Wildlife-dependent Recreational Use:** “A use of a refuge involving hunting, fishing, wildlife observation and photography, or environmental education and interpretation.” (605 FW 1). These are the six priority public uses of the Refuge System Administration Act, as amended. Wildlife-dependent recreational uses, other than the six priority public uses, are those that depend on the presence of wildlife.

## Abbreviations Used

AMAFCA:	Albuquerque Metropolitan Arroyo and Flood Control Authority
CCP:	Comprehensive Conservation Plan
CMP:	Conceptual Management Plan
County:	Bernalillo County
EE:	Environmental Education
FONSI:	Finding of no significant impact
FTE:	Full-time employee
FWS:	U.S. Fish & Wildlife Service
LEED:	Leadership in Energy and Environmental Design
MRG:	Middle Rio Grande
NEPA:	National Environmental Policy Act
NWR:	National Wildlife Refuge
NWRS:	National Wildlife Refuge System
Service:	US Fish & Wildlife Service
System:	National Wildlife Refuge System
TPL:	The Trust for Public Land
USFWS:	U.S. Fish & Wildlife Service

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## **Appendix 1. DRAFT LAND PROTECTION PLAN**

### **DRAFT LAND PROTECTION PLAN FOR A PROPOSED NEW URBAN NATIONAL WILDLIFE REFUGE, BERNALILLO COUNTY, NEW MEXICO**

#### **Introduction**

The U.S. Fish and Wildlife Service (Service) is the principal federal agency with the responsibility for conserving, protecting, and enhancing fish and wildlife and plants and their habitats for the continuing benefit of the American people. The Service manages the 150 million-acre National Wildlife Refuge System (System) which encompasses more than 552 National Wildlife Refuges, thousands of small wetlands and other special management areas. It also operates 70 national fish hatcheries, 64 fishery resource offices, and 78 ecological services field stations. The agency enforces federal wildlife laws, administers the Endangered Species Act, manages migratory bird populations, restores nationally significant fisheries, conserves and restores wildlife habitat such as wetlands, and helps foreign governments with their conservation efforts. It also oversees the Wildlife and Sport Fish Restoration program that distributes hundreds of millions of dollars in excise taxes on fishing and hunting equipment to state fish and wildlife agencies.

The mission of the National Wildlife Refuge System is:

“... to administer a national network of lands and waters for the conservation, management and, where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans” (National Wildlife Refuge System Improvement Act of 1997, Public Law 105-57).

The goals of the National Wildlife Refuge System are to:

- 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 interjurisdictional 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 underrepresented in existing protection efforts;
- provide and enhance opportunities to participate in compatible wildlife-dependent recreation (hunting, fishing, wildlife observation and photography, environmental education and interpretation); and
- foster understanding and instill appreciation of the diversity and interconnectedness of fish, wildlife, and plants and their habitats.

#### **Purpose for the LPP**

The United States Fish and Wildlife Service (Service), is proposing to acquire the 570-acre Price’s Dairy and the associated water rights for establishment as a new National Wildlife Refuge in Bernalillo County, New Mexico. An Environmental Assessment (EA) has been

prepared to evaluate the effects associated with this proposal and complies with the National Environmental Policy Act (NEPA) in accordance with Council on Environmental Quality regulations (40 CFR 1500-1509) and Department of the Interior (516 DM 8) and Service (550 FW 3) policies. NEPA requires examination of the effects of proposed actions on the natural and human environment. This Land Protection Plan presents the alternatives that are also addressed in the Environmental Assessment.

### **Refuge Purpose(s)**

National Wildlife Refuges are established for a particular purpose. Formal establishment is generally based upon a statute or executive order that specifies a purpose for that Refuge. The project would be administered as part of the Refuge System in accordance with the National Wildlife Refuge System Administration Act of 1966 and other relevant legislation, executive orders, regulations, and policies. The Refuge would be established under the Refuge Recreation Act of September 28, 1962 (16 U.S.C. 460k-460k-4), as amended, and the Fish and Wildlife Act of 1956 (16 U.S.C. 742a-742j), as amended. Acquisition funding could be provided by the Land and Water Conservation Fund. Bernalillo County has pledged \$5 million to purchase an overlying conservation easement on the property to help support acquisition and ensure visitor access to the site as part of the County's Open Space Program, assuming Service acquisition can be initiated by September 2012.

**Refuge Purpose:** The primary purpose for establishment is to create a Refuge "*suitable for— (1) incidental fish and wildlife-oriented recreational development, (2) the protection of natural resources, (3) the conservation of endangered species or threatened species*" ... The Refuge Recreation Act (16 U.S.C. § 460k-460k-4) authorized the Secretary of the Interior to administer Refuges, hatcheries and other conservation areas for recreational use, when such uses do not interfere with the area's primary purposes.

A secondary purpose would be "... *For the development, advancement, management, conservation, and protection of fish and wildlife resources.*" (Fish and Wildlife Act of 1956 16 U.S.C. 742a-742j).

The primary goal for the Refuge would be "...to foster environmental awareness and outreach programs, and to develop an informed and involved citizenry that will support fish and wildlife conservation." (USFWS Refuge Manual 341 FW 1).

### **Need for Action**

The history of land uses along the Middle Rio Grande Valley (MRG) and its watershed started with extensive Native American settlement and utilization. Following European settlement land use was dominated by livestock grazing and farming until 20th century urban development accelerated, all of which have impacted the river corridor's biological integrity and contributed to major export or utilization of surface and groundwater. In the last 450 years there have been profound changes in the land use, hydrology, geomorphology, vegetation, and other natural features in the Middle Rio Grande Valley (Finch and Tainter 1995). Ongoing threats to habitat in the area include urban development, surface and groundwater pumping for agriculture and urban uses, human-caused wildfires in the riparian forest (bosque), and spread of non-native plants.

At 570 acres, this former dairy is one of the largest remaining undeveloped farms in the Middle Rio Grande Valley and the largest agricultural property within the Albuquerque metro region. The opportunity exists now to preserve this property to provide environmental education to a diverse under-served public, engage urban citizens in the National Wildlife Refuge System, restore wildlife habitat, preserve the historical and cultural values intrinsic to the Middle Rio Grande, and provide compatible, non-consumptive wildlife-dependent recreation.

The Price Family is interested in leaving a conservation legacy on this property and has considered various options since the dairy was shut down in 1998. Given the property's size and location, it has been the target of various development proposals as well as efforts by various federal, state, and local agencies to preserve and protect the property. During that time, other large properties on the river have been sub-divided, developed, and the water rights sold to support other needs. If a conservation disposition cannot be accomplished the owners have indicated they would likely sell the property on the open market. A large residential development or light commercial development would be the most likely land uses that could result from an open market sale. In addition, the senior water rights attached to the property would likely be sold to a large municipal entity or developer, potentially resulting in less water flowing through the Middle Rio Grande. This outcome would be expected to further degrade the habitat and water resources of the Middle Rio Grande as well as impact water supply to the agricultural community.

The proposed Refuge could contribute to objectives for protecting and restoring river corridor habitats developed in the Middle Rio Grande Endangered Species Act Collaborative Program by protecting land available for habitat restoration to support southwestern willow flycatcher populations and by acquiring water rights that could be used for ecological restoration. The Rio Grande near the property is designated critical habitat for Rio Grande silvery minnow. The Service is exploring placing water rights in excess of that needed for habitat restoration needs on the tract into the New Mexico Strategic Water Reserve program (that could be used for ecological restoration in the Middle Rio Grande Ecosystem).

As of the 2010 census Bernalillo County's population stood at 662,564, and had grown by 16.0 percent since 2000 (<http://www.cubitplanning.com/county/2618-bernalillo-county-census-2010-population>). The City of Albuquerque is among the fastest growing urban areas in the United States and its growth contributes to a loss of cultural resources while further stressing the natural resources of the Middle Rio Grande Valley and the Rio Grande.

### **Specific role of the proposed project in achieving U.S. Fish and Wildlife Service goals**

This proposed new National Wildlife Refuge in Bernalillo County, New Mexico would constitute an urban Refuge and be a contribution by the Southwest Region of the Service to a conservation partnership with Bernalillo County in the South Valley area of Albuquerque. If the Refuge is not established, there would be a loss of an important urban outdoor education opportunity for the Service to connect Americans to nature and the great outdoors. The Service defines urban Refuges as those lands and waters in, or adjacent to, metropolitan areas with populations over 100,000 people. Some urban Refuges may protect habitats of great significance to the conservation of fish and wildlife resources, including endangered and threatened species. However, the primary purpose for establishment of new urban Refuges is to foster environmental

awareness and outreach programs, and to develop an informed and involved citizenry that will support fish and wildlife conservation. These Refuges will provide public use benefits associated with fish and wildlife resources that include, but are not limited to, bird watching, nature photography, scientific research, environmental education, open space in an urban setting, and protection of cultural resources.

The need for connecting urban youth to nature is more critical than ever. Today, the average student spends nearly 7.5 hours of each day on “screen time” – during school, watching television, video gaming, and on-line with computers and smartphones. The resulting disconnect from nature is reflected in the lack of understanding and appreciation of the natural world by our nation’s youth.

The Price’s Dairy site is easily accessible to the metro Albuquerque area and Bernalillo County, a half-hour drive from 40 percent of the state’s population, and could provide outstanding opportunities for outdoor experiences. The development of an urban Refuge focused on providing outdoor experiences for urban youth, particularly upper elementary age students, but inclusive of all ages, will help connect youth to nature.



© Don Usner  
Recreation opportunities will be available at the Refuge

The Refuge could offer a number of benefits for the public: bolstering environmental education for youth; providing a gateway for an urban population to the larger regional Service Refuge system and broader conservation goals; as open space and as a trailhead to the adjacent bosque; providing recreational opportunities and adding to the quality of life for the nearby community;

protecting the natural resource values that would be lost through development of the property and loss of the water rights; and recognizing the rich cultural history of the Middle Rio Grande Valley. Its proximity to the Rio Grande, large undeveloped acreage and existing farming activity offer the Service and partnering agencies an opportunity to engage in sustainable environmental enhancement practices while connecting young people and urban residents to the natural world. In particular the sale and severing of the water rights from the property would have consequences on the local habitat as well as the greater Middle Rio Grande Ecosystem. There would be less water entering an already stressed hydrologic system and no contribution of water or land to support endangered species, to promote the biological integrity of the Middle Rio Grande habitat corridor, or to support ecological restoration efforts. In addition, with establishment of the Refuge and the potential for the Service to develop a major environmental education program and visitor's center at the site, there is also enhanced opportunity for economic stimulus to the South Valley.

An urban National Wildlife Refuge would be important for the following values and benefits:

- Educational opportunities for diverse underserved urban youth, as well as for adult of all ages from the metropolitan area
- Expose urban populations to the USFWS National Wildlife Refuge System
- Partnership opportunities with educational institutions and resource agencies
- Trail connection to Paseo del Bosque Trail and Rio Grande Valley State Park
- Enhanced public recreation opportunities
- Preservation of open space in metropolitan Albuquerque
- Demonstration area for restoration of native vegetation
- Education area for importance of endangered species and habitat conservation
- Recognition of the significance of agriculture in the Middle Rio Grande Valley
- Water use for ecological benefits and restoration

Establishing the proposed Refuge would:

- Foster environmental awareness through environmental education opportunities and outreach programs,
- expose an urban population to the larger USFWS Refuge system,
- develop an informed and involved citizenry that will support fish and wildlife conservation,
- expand outdoor recreation opportunities in proximity to the Rio Grande State Park and the Paseo del Bosque Trail,
- protect and enhance the natural resource values that would be degraded or lost through development of the property, including the loss of the water rights, and
- capitalize on the Service's partnership with Bernalillo County to achieve shared goals.

### **Proposed Action**

The Service is proposing to acquire the 570-acre Price's Dairy and the associated water rights for establishment of the Southwest Region's first urban National Wildlife Refuge in Bernalillo County, New Mexico.

## **Study Area**

Price's Dairy is located on 2nd Street in the South Valley, Bernalillo County, New Mexico, five miles south of downtown Albuquerque, near one of the longest rivers in North America, the scenic Rio Grande. The property is located at the most northern end of the Chihuahuan desert within the historic floodplain of the Rio Grande. Very little native habitat representing the ecoregion or the river's habitat currently exists on the parcel. The 570-acre parcel was used as a dairy from the 1920's to the 1990's and since then has been used for alfalfa and grass hay production. There are senior waters rights attached to the property which have been used to irrigate the hay crops. The property is located adjacent to the Albuquerque Riverside Drain and the Williams Lateral which provides irrigation water delivery on the east side of the Rio Grande bosque (adjacent to the Rio Grande Valley State Park), which has some limited riparian cover including native cottonwood (*Populus* spp.) and willow (*Salix* spp.) species and non-native Russian olive (*Elaeagnus angustifolia*) and Siberian elm (*Ulmus pumila*) trees.

The site's location adjacent to the bosque and the Rio Grande Valley State Park will provide a buffer zone from urban and semi-rural development that surrounds the tract on the other three sides. Riparian habitat restoration on the Refuge will provide additional connection on the east side of the Rio Grande for neotropical birds migrating along the bosque. The Middle Rio Grande bosque occasionally suffers from human-caused wildfires due to its proximity to a dense urban population. The bosque immediately west of the tract suffered a wildfire in recent years and various agencies are actively restoring it. The tract will also provide additional cover for terrestrial species that move north and south along the east side of the channel, which is often barren in other reaches. A grid of smaller irrigation ditches and laterals currently crosses the tract. Along 2nd Street on the east side of the tract several buildings left over from the dairy era are still being used for offices, a residence for an on-site caretaker, other residences, and equipment storage. The tract has one large irrigation well that is not currently used. Land use in the immediate surrounding area is mostly in the form of low-density residential and light industrial development, a railroad track, and some small farms.

## **Related Actions**

The Service is working with other public and private entities in the project area. A new Refuge would offer excellent opportunities for partnerships with federal, state, local, academic, non-profit and private entities. Bernalillo County (County) has pledged \$5 million towards the purchase of a conservation easement on the property that will ensure visitor access to the site as part of the County's Open Space Program, assuming Service acquisition can be initiated by September 2012. The County has an interest in developing complementary interpretive and programmatic opportunities, in conjunction with the Service, to inform the public about the site's ecology and the rural historical land uses of the Middle Rio Grande since pre-colonial times. The Service, working with the County Open Space Program and other potential interested partners, would design and develop an environmental learning program and facilities, and wildlife-oriented outdoor recreation facilities that would emphasize natural learning and recreational experiences. New Mexico State Parks has expressed an interest in working with the Service to coordinate environmental education programs at the Rio Grande Nature Center. The El Camino Real de Tierra Adentro National Historic Trail, administered by the Bureau of Land Management and National Park Service, is on or adjacent to the site and creates another opportunity for historical interpretation.

The Albuquerque Metropolitan Arroyo and Flood Control Authority (AMAFCA) has proposed siting a 60-acre floodwater retention basin and associated channel improvements on the site of the proposed Refuge. Service staff have communicated concerns about potential impacts of such a project in regards to contaminants, solid waste, invasive weeds, and questioned whether this proposed use of the site would be consistent with establishment of the Refuge. Staff will continue to work with AMAFCA in an effort to cooperatively address these concerns, while recognizing the importance of addressing drainage and storm water management in the South Valley area.

### **Decision(s) to be Made**

The Service's planning team including the cooperating agency, Bernalillo County, will complete an analysis of the environment and management alternatives. Based on the analysis, documented in the Environmental Assessment, the Service's Regional Director of the Southwest Region, with concurrence of the Director of the Fish and Wildlife Service, will make two decisions.

- Determine whether or not the Service should establish the Urban National Wildlife Refuge by purchasing the Price's Dairy.
- If yes, determine whether the selected alternative would have significant impact on the quality of the human environment. The National Environmental Policy Act of 1969 requires this decision. If the quality of the human environment would not be significantly affected, a finding of no significant impact (FONSI) will be signed and made available to the public. If the alternative would have a significant impact, completion of an environmental impact statement would be required to address those impacts.

### **Public Participation and Issue Identification**

Public input was solicited and project information was presented to the public in a number of different ways. Press releases were issued in Albuquerque and major communities with a 60-mile radius. Interviews were conducted with the major print and television media outlets. Approximately 15 meetings were conducted with key stakeholders, community members, and other interested parties. Three public meetings (described below) were conducted in the Albuquerque metro area in February 2011 during the initial scoping process to identify issues to be analyzed for the proposed project. The meeting format was open house with approximately 1 hour of presentations and a question and answer session with a panel of Service staff, followed by the opportunity to visit various stations with specific subject matter experts describing the project and talk with Service and Bernalillo County staff in more detail. At each of the meetings a planning update packet was distributed with information on the proposed project, an estimated project time line, common questions and answers, and a sign-up sheet to receive future information. This planning update was also available on the Region's website and a special email account was created to accept comments.

At least 49 landowners, citizens, and elected officials (or their representatives) attended the meetings and most expressed support for the project. Additionally, there were 16 written submissions providing comments and identifying issues and concerns. The Service's field staff contacted local government officials, other public agencies, neighborhood organizations, and conservation groups that have expressed an interest in the project.

Initial Public Scoping Meetings in Albuquerque, NM

Tuesday February 7th 3-5 pm

Mountain View Community Center

201 Prosperity Avenue, SE

Thursday February 9th 6-8 pm

Raymond G. Sanchez Community Center

9800 4th Street, NW

Saturday February 12th 10am-noon

South Valley Multipurpose Center

2008 Larrazolo Road, SW

This Land Protection Plan, along with the Environmental Assessment, Conceptual Management Plan, and Interim Compatibility Determinations will be made available for a 30-day public review and comment period. After this, comments will be analyzed, incorporated, and responded to, and final decision documents will be prepared in the Fall of 2011.

**Issues Identified During Scoping**

The following questions or issues were raised during the public meetings or through other contacts. These comments are addressed specifically in Appendix 4.

- Traffic and vehicular access to the proposed Refuge
- Trespass onto adjacent private properties, security
- Increasing numbers of birds to the site that may pose a hazard to air traffic passing over the site to or from the Albuquerque International Sunport
- The impacts of noise from air traffic using the Albuquerque International Sunport on the outdoor experience
- Changes in types of habitat available on the property and subsequent changes in types and numbers of wildlife using the site
- Presence of contaminants from historic agricultural operations
- High anticipated acquisition cost of the property and the sources of the funding that would be used for acquisition
- Is there really a need for the Refuge when there are existing facilities around Albuquerque that could be used for wildlife viewing and outdoor education

- What types of recreational uses are allowed on a new Refuge
- Should the new Refuge be established as a Unit of Bosque del Apache National Wildlife Refuge

### **Habitat Protection and Land Acquisition Process**

The Service acquires lands and interests in lands, such as easements, and management rights in lands through leases or cooperative agreements, consistent with legislation or other congressional guidelines and executive orders, for the conservation of fish and wildlife and to provide wildlife-dependent public use for recreational and educational purposes. When land is needed to achieve those objectives, the Service seeks to acquire the minimum interest necessary to reach those objectives. If fee title is required, the Service gives full consideration to extended use reservations, exchanges, or other alternatives that will lessen the impact on the owner and the community. Donations of desired lands or interests are encouraged. In all fee title acquisition cases, the Service is required by the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (Public Law 91-646) to offer 100 percent of the property's appraised market value, as set out in an approved appraisal that meets professional standards and federal requirements. Land interests are acquired only from willing sellers/donors and are subject to the availability of funding. The presence of a National Wildlife Refuge would not mean increased regulation of adjacent private land uses.

The Refuge would be established under the Refuge Recreation Act of 1962, as amended, and the Fish and Wildlife Act of 1956, as amended. The federal money used to acquire interests in land for natural resource protection is from the Land and Water Conservation Fund, which is derived primarily from oil and gas leases on the outer continental shelf, motorboat fuel tax revenues, and sale of surplus federal property. There could be additional funds to acquire lands, waters, or interest therein for fish and wildlife conservation purposes through other congressional appropriations or donations from non-profit organizations and other sources.

While land owned by the U.S. Government is not taxable by state or local authorities, the federal government has a program in place to compensate local governments for foregone tax revenues. The Refuge System typically makes an annual payment, called Refuge Revenue Sharing, in lieu of taxes to local governments. The amount of the payment depends on the final Congressional budget appropriations for the Service for that year. It is anticipated that as the numbers of Refuge visitors increase, there would be an economic stimulus in the nearby area to provide goods and services for those visitors. The presence of the urban Refuge and its education center should be an environmental and economic benefit to residents of the South Valley, Albuquerque and Bernalillo County, and visitors to the local area.

Eligibility for relocation assistance for tenants on the property will be assessed under Public Law 91-646. Public Law 91-646 was passed by Congress to provide for uniform and equitable treatment of persons displaced from their homes, businesses, or farms by federal and federally assisted programs and to establish uniform and equitable land acquisition policies for federal and federally assisted programs.

## **II. Alternatives, Including the Preferred Alternative**

### **How alternatives were developed**

The current owners of the property asked that The Trust for Public Land (TPL) assist with conserving the property. Realizing that the location and restoration values, potential partnerships, and opportunity to connect a large urban population to the outdoors fit the missions of the Service and Bernalillo County Open Space, TPL approached the Service and Bernalillo County proposing a partnership approach to protecting the property.

### **Description of the Alternatives**

#### **Alternative A – No Action Alternative:**

Under the No Action Alternative, the Service would not acquire the Price's Dairy parcel. The Price Family is interested in leaving a conservation legacy on this property and have considered various options since the dairy operation was shut down in 1998. If a conservation outcome cannot be accomplished, the owners have indicated they would likely sell the property on the open market. A large residential development or light commercial development would be the most likely land use that could result from an open market sale. In addition, the senior water rights attached to the property would likely be sold to a large municipal entity or developer, potentially resulting in less water flowing through the Middle Rio Grande. This outcome would be expected to further degrade the habitat and water resources of the Middle Rio Grande as well as impact water supply to the agricultural community.

#### **Alternative B – Acquisition Alternative (Preferred Alternative):**

Acquisition of the Price's Dairy parcel and water rights and subsequent establishment of a new National Wildlife Refuge.

Under Alternative B, the Service would acquire the fee title interest in the 570-acre Price's Dairy property and establish the first urban National Wildlife Refuge in the Service's Southwest Region. The Service would also acquire senior water rights attached to the property. Bernalillo County has pledged \$5 million towards the purchase in return for gaining a conservation easement on the property that will ensure visitor access to the site as part of the County's Open Space Program, assuming the Service can initiate acquisition by September 2012. The Service, working with the County Open Space Program and other potential interested partners, would design and develop an environmental learning facility and compatible outdoor recreation facilities that would emphasize natural learning and recreational experiences, especially as they could be tied in to the adjacent Rio Grande Valley State Park that borders the Rio Grande. The site would be converted from an agricultural hay production operation to habitat benefitting a variety of native wildlife species, especially those that use Rio Grande bosque (riparian forest). Although the site would likely never look like true bosque (dense closed-canopy cottonwood-willow forest), it could approach that form in terms of a savannah-like mixed grassland with scattered native tree species. The Service will explore restoration designs that include other habitats such as meadows and small wetlands to increase wildlife species diversity using the site.

#### **Alternatives considered but dismissed from detailed analysis**

Some parties have proposed that the Service could acquire interest in the property through a conservation easement, which would be less costly than acquisition of fee title interest. However, the landowner has not expressed interest in retaining any ownership of the property

and no other entity has come forward to pursue acquisition of the underlying fee title interest for conservation purposes.

There are other undeveloped and agricultural parcels in the Albuquerque metro region, but they are not as large, are not available, or are unsuitable for urban National Wildlife Refuge establishment because they are surrounded by industrial or commercial lands. The site's location adjacent to the Rio Grande bosque is a key component of this proposed action.

**Summary of land protection strategy**

The 570-acre parcel and senior water rights owned by the Price Family is proposed to be protected by fee acquisition by the Service, subject to congressional appropriation. Acquisition cost would depend on appraised fair market value and the final quantification of senior water rights, but it is estimated at this time at \$16-23 million (\$8 million land value and \$8-15 million water rights). There are 200-400 acres of land on the property with senior water rights. The owners are currently working with the New Mexico Office of the State Engineer to quantify the water rights. Acquisition of water rights is both desirable and critical for habitat restoration on the site. The Service is seeking to acquire a fee interest on the property subject to an overlying easement interest held by Bernalillo County. Bernalillo County has proposed to acquire a conservation easement on the property and has pledged \$5 million if the Service can start acquiring the property by September 2012.

**Estimated Land Protection Costs.**

	<b>Land &amp; Improvements</b>	<b>Water Rights</b>	<b>Relocation</b>	<b>Other<sup>1</sup></b>	<b>Total</b>
Acquisition	\$8 million	\$8-15 million	To be determined	\$73,000	\$16.073-23.073 million
Contaminants				\$2,000	\$2,000
Totals:	\$8 million	\$8-15 million	To be determined	\$75,000	\$16.075-23.075 million

<sup>1</sup> direct Service costs *e.g.* cadastral and contaminant surveys, appraisals, contracts

**Estimated Operations and Maintenance Costs**

Estimated <i>One-Time</i> Operations Costs			
		FTEs	Costs
Restoration <sup>1</sup>			\$100,000
Land Management <sup>2</sup>			\$200,000
Public Use <sup>3</sup>			\$7,000,000
<b>Subtotals:</b>			<b>\$7,300,000</b>
<b>Estimated <i>Annual</i> Costs</b>			
Operations	Land Management <sup>2</sup>	1.5	\$200,000
	Public Use <sup>3</sup>	1.5	\$200,000
Maintenance	Land Management <sup>2</sup>	0.5	\$75,000
	Public Use <sup>3</sup>	0.5	\$75,000
<b>Subtotals:</b>		<b>4.0</b>	<b>\$550,000</b>
<b>Grand Totals</b>		<b>0</b>	<b>\$7,850,000</b>
<b>Revenue Sharing</b>			
<sup>1</sup> habitat, building site cleanup			
<sup>2</sup> habitat, equipment, roads, utilities, buildings, and other facilities			
<sup>3</sup> equipment, roads, utilities, buildings, and other facilities			

## **Appendix 2: CONCEPTUAL MANAGEMENT PLAN & INTERIM COMPATIBILITY DETERMINATIONS**

### **CONCEPTUAL MANAGEMENT PLAN FOR A PROPOSED NEW URBAN NATIONAL WILDLIFE REFUGE, BERNALILLO COUNTY, NEW MEXICO**

#### **INTRODUCTION**

This Conceptual Management Plan for the proposed Urban National Wildlife Refuge in Bernalillo County, is an overview of how the land will be managed until a Comprehensive Conservation Plan (CCP) for the new Refuge is completed. As a conceptual plan, it does not provide extensive detail related to site specific management, pinpoint exactly where structures would be, or show exactly where public use facilities would be located. However, this plan should answer those questions commonly posed by the public during the planning and public involvement process for consideration of establishing a new national wildlife refuge. All management and public use actions must be compatible with the purposes for which a Refuge is established.

The proposed addition to the National Wildlife Refuge Systems will encompass the 570-acre Price's Dairy property on the periphery of the city of Albuquerque in Bernalillo County, New Mexico.

The mission of the National Wildlife Refuge System is:

“... to administer a national network of lands and waters for the conservation, management and, where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans” (National Wildlife Refuge System Improvement Act of 1997, Public Law 105-57).

The goals of the National Wildlife Refuge System are to:

- 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 interjurisdictional 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 underrepresented in existing protection efforts;
- provide and enhance opportunities to participate in compatible wildlife-dependent recreation (hunting, fishing, wildlife observation and photography, and environmental education and interpretation); and
- foster understanding and instill appreciation of the diversity and interconnectedness of fish, wildlife, and plants and their habitats.

**Land Acquisition Policy for Urban Refuges.** The Service seeks to provide Refuge visitors with an understanding and appreciation of fish and wildlife resources through environmental education and interpretation and through wildlife-oriented recreational experiences to the extent these activities are compatible with the purposes for which a Refuge is established.

(1) The official Service land acquisition policy for urban Refuges is to acquire lands and waters in or adjacent to metropolitan statistical areas to protect fish and wildlife resources and habitats that will provide the public wildlife-oriented recreation, education, and interpretation opportunities.

(2) Some urban Refuges may protect habitats of great significance to the conservation of fish and wildlife resources, including endangered and threatened species. However, the primary purpose for establishment of new urban Refuges will be to foster environmental awareness and outreach programs, and to develop an informed and involved citizenry that will support fish and wildlife conservation. If Service lands already exist in the same urban area, the Service will only acquire additional habitat types of sufficient size to meet habitat needs as determined by the Regions, as well as by education, interpretation, and recreation needs that are not currently being met by the existing Refuge or other State or county agencies. These Refuges will provide public use benefits associated with fish and wildlife resources that include, but are not limited to, bird watching, fishing, scientific research, environmental education, open space in an urban setting, and protection of cultural resources.

Management, operational, and acquisition considerations for urban Refuges will include:

- (a) Education, interpretation, and wildlife-oriented recreation value;
- (b) Opportunities for partnerships with State and local governments, private individuals, or citizens groups;
- (c) Potential role of non-profit or volunteer groups for management purposes;
- (d) Adequacy of buffer areas and habitat corridors where possible that contribute appreciably to the long-term preservation of habitats.

**Purposes of Proposed Urban National Wildlife Refuge.**

Refuge purpose statements are primary to the management of each Refuge within the System. The purpose statement along with the Mission of the NWRS are the bases upon which primary management activities are determined. These statements are the foundation from which “allowed” uses of Refuges are determined through a defined “compatibility” process.

**Refuge Purpose:** The primary purpose for establishment is to create a Refuge “*suitable for— (1) incidental fish and wildlife-oriented recreational development, (2) the protection of natural resources, (3) the conservation of endangered species or threatened species*” ... The Refuge Recreation Act (16 U.S.C. § 460k-460k-4) authorized the Secretary of the Interior to administer Refuges, hatcheries and other conservation areas for recreational use, when such uses do not interfere with the area's primary purposes.

A secondary purpose would be “... *For the development, advancement, management, conservation, and protection of fish and wildlife resources.*” (Fish and Wildlife Act of 1956 16 U.S.C. 742a-742j).

The primary goal for the Refuge would be “...to foster environmental awareness and outreach programs, and to develop an informed and involved citizenry that will support fish and wildlife conservation.” (USFWS Refuge Manual 341 FW 1).

### **Refuge Objectives:**

The objectives for the proposed Refuge are to:

- Provide a location and setting for a large urban public to experience recreational, interpretative, and educational activities consistent with the National Wildlife Refuge System and Bernalillo County Open Space Program to educate future generations and foster public support for fish and wildlife conservation.
- Restore a variety of Middle Rio Grande ecosystem habitats to support a diversity of wildlife in a semi-urban setting.
- Improve the ecological integrity and resilience of the Middle Rio Grande Ecosystem.

## **REFUGE ADMINISTRATION AND FACILITIES MANAGEMENT**

The proposed Urban National Wildlife Refuge would be administered and managed by the Fish and Wildlife Service as part of the National Wildlife Refuge System subject to laws and policies applicable to Refuge lands. Initially the administrative headquarters for the proposed project area may be located at the Service’s regional office in Albuquerque, New Mexico.

### **Staffing**

The first staff position would most likely be for a Refuge manager position with a public use emphasis. Extensive partner involvement, including the Bernalillo County Open Space Program, and a Friends Group, would be developed to help staff, facilitate, and potentially manage visitation. As development of infrastructure and restoration actions are completed, and visitor use increases, additional FTE’s for facilities maintenance, administration, land management, and additional public use staff will need to be added.

### **Budget**

Estimated start-up costs for the new Refuge are \$300,000 with estimated annual operations and maintenance costs of \$550,000 anticipated at full Refuge development. Construction costs for an education center are estimated at \$7,000,000. It could take several years for a congressional appropriation for visitor’s center construction. Initial operations costs would include needs for security and fencing, habitat restoration, visitor services facilities, and administration facilities. It could take several years to obtain all the funding necessary for construction of facilities and for restoration of habitat on the site.

### **Oversight**

The Southwest Regional Office is located in Albuquerque, New Mexico, and provides oversight of Refuge administration and management. The Regional Office also provides technical assistance on matters such as engineering, public use planning, and land acquisition.

## **Facilities**

The Bernalillo County Board of County Commissioners will have to approve a special use permit or a conditional use permit for the Refuge. A site plan that shows building locations and footprints, grading and drainage, vehicular parking and ingress and egress, and utility connections will need to be submitted at the appropriate time after land acquisition but before any public facility is constructed. Adequate road and utility infrastructure will be a condition of land use approval. Public meetings with adjacent residents and area neighborhood associations will also need to be part of this process.

The western 1/2-2/3 of the property will be managed for habitat restoration and the remaining area utilized for infrastructure needs because it is adjacent to 2<sup>nd</sup> Street. The Service is responsible for maintaining facilities on its lands. Upon acquisition of any property, the Service will evaluate the condition and any need for retaining any structures or buildings. Structures or buildings may be kept for Service use, sold off for relocation to another site, sold for salvage or destroyed. If a structure is on, or eligible to be on, a state or national register of historic places, it cannot be destroyed. It must be maintained or properly disposed of to an entity that will maintain it. Sustainable design models could be utilized on new construction or retrofitted to existing structures to showcase sustainable living. Leadership in Energy & Environmental Design (LEED) building techniques may be integrated into facilities design. Bernalillo County Open Space has an interest in developing complementary interpretive and programmatic opportunities, in conjunction with the Service, to inform the public about the site's ecology and the rural historical land uses of the Middle Rio Grande since pre-colonial times. New Mexico State University has expressed some interest in locating extension offices, native plant materials center and demonstration plots for native plant restoration of retired farmlands on the site.

If a floodwater retention pond proposed by the Albuquerque Metropolitan Arroyo and Flood Control Authority (AMAFCA) is built on or adjacent to the site, the Service will have to work closely with AMAFCA to manage and mitigate safety issues as well as floodwater damage, debris, and pollutants, and cleanup after storm events.

Facilities associated with the environmental education program would focus on the outdoor environment, rather than an expansive building. While building space is important, and necessary, the focus will be on getting students outside, where they can be in close contact with the environment. Facilities would include basic classroom space, wet-lab space and assembly areas for up to two busloads of students (approximately 150 students at a time), with a total capacity of 150 on site at one time. These facilities would be developed to provide maximum flexibility to accommodate other groups such as local civic clubs who support the Refuge, training courses for volunteers and staff, and meeting space for partner organizations. The student facilities will be physically separate from the visitor facilities to enhance both the student and visitor experience, and for the security of students.

The administrative building component will also be limited in size and be physically separate from the environmental education facility. It will house Refuge staff and partner offices and a modest visitor center. The visitor center is proposed to be a welcome and gateway to the National Wildlife Refuge System and New Mexico Refuges generally, and the Bosque/Rio Grande specifically. Exhibits would introduce the Middle Rio Grande ecosystem and unique

cultural history, provide space for partnership displays (for example, Bernalillo County Open Space) and invite visitors to explore not only the Urban Refuge, but other nearby facilities such as the Albuquerque BioPark Hispanic Cultural Center and the Rio Grande State Park and Nature Center. It would further invite visitors to continue down the Rio Grande to Sevilleta NWR and Bosque del Apache NWR to learn more and experience the unique Middle Rio Grande corridor. A small gift shop that would support Refuge activities would be operated by the Friends of the refuge.

### **Law Enforcement**

Enforcement of state and federal laws on a national wildlife Refuge is important to safeguard the refuge's infrastructure, natural and cultural resources, and to protect and manage visitors. Service law enforcement staff would work closely with other law enforcement agencies and complement their efforts. Visitors must comply with existing laws, regulations, and policies concerning access and harassment of wildlife when participating in any activity on the Refuge. The Refuge exterior boundary will be fenced to minimize potential visitor trespass on to adjacent properties.

The Refuge will limit and control Refuge access through enforcement of Refuge regulations, signage, and education of the public as to the purpose of the Refuge and responsibilities of visitors. These actions also help ensure visitor safety and quality of experience.

## **HABITAT MANAGEMENT**

Historically cottonwood-willow forest (commonly referred to by its Spanish name, bosque), savanna, seasonal wetlands, and wet meadows were common habitats on the floodplain of the Rio Grande. Periodic floods would deposit sediment and alter the geomorphology of the floodplain, in turn altering the vegetation mosaic. For many decades the site was used as a dairy, then in the 1990s it was converted to a farm for producing grass and alfalfa hay. Habitat management on the proposed area will include restoration of the variety of habitats common historically on the floodplain. We envision a combination of grasslands, shrublands, savanna, small wetlands, and bosque forest restoration. Populations of endangered southwestern willow flycatcher, migratory birds, raptors, pollinators, and non-game wildlife species would be enhanced and protected. Water rights acquired with the land will be used to support restoration projects, but water in excess to that needed for restoration could be utilized for ecological restoration or instream flow for the Middle Rio Grande ecosystem. Detailed restoration plans will be developed as more information is gathered on soils, hydrology, irrigation potential, and other potential limiting factors. Habitat for species of special concern may be created but consideration will be given to avoid creating population sinks for declining species. Public use of portions the Refuge may need to be excluded temporarily for some sensitive resources or to allow restoration of native vegetation.

### **Vegetation Restoration**

We anticipate that restoration of the land will take a number of years, and is unlikely to happen immediately upon the Service taking possession. To attempt to minimize problems with invasive plant species we may employ cooperative farming until that time when portions of the property can be restored. In this way, the farmer(s) will manage weeds as they would under any normal farming operation allowing the Service to proactively manage weeds in restoration areas. We

anticipate implementing monitoring and research projects on areas being restored.

Habitat restoration areas could serve as demonstration areas for other landowners interested in improving habitats on their lands and partners may be interested in doing joint “habitat improvement demonstration days” or similar events.

### **Fish and Wildlife Population Monitoring**

The primary purpose of the Refuge is to provide compatible outdoor recreation and education opportunities. Nonetheless, conservation of natural resources will guide management of other activities. Periodic surveys would be conducted on the proposed Refuge to document the occurrence of species, and to assess population numbers and habitat use. Some surveys would be conducted in cooperation with the New Mexico Department of Game and Fish to tie into its current databases. Educational institutions, other governmental agencies, and private groups will generally be allowed to conduct surveys or research on the Refuge, as long as these activities are deemed compatible and do not cause harm to resources.

## **PUBLIC USE OPPORTUNITIES AND MANAGEMENT**

**National Wildlife Refuge System Priority Recreational Uses.** The National Wildlife Refuge System Improvement Act of 1997 ensures that six priority wildlife-dependent recreational uses are strongly considered for integration into Refuge programs provided they are determined compatible with the purposes for which the Refuge was established and the Mission of the National Wildlife Refuge System as defined earlier. These six priority wildlife-dependent uses are: “... *hunting, fishing, wildlife observation and photography, and environmental education, and interpretation.*” The Act also insures that, on lands added to the Refuge System, existing compatible wildlife-dependent recreational uses will continue, pending completion of a comprehensive conservation plan (CCP) for the refuge. The Act ensures that the public is given an opportunity to participate in the process that determines whether an activity is compatible. Additionally, any management recommendations to discontinue uses found not to be compatible would most likely undergo National Environmental Policy Act (NEPA) compliance wherein the public is again given the opportunity to participate. If an existing use is legal, compatible, safe, consistent with sound fish and wildlife management principles, and otherwise in the public interest, the Service assesses whether it has the funding and staffing to administer that program. If those resources are insufficient, the new law requires the Service to seek out partners to assist in implementing that program. Only after exhausting all possibilities for assistance from partners, can the Service prohibit an otherwise compatible, safe and sound wildlife-dependent public recreational use. Therefore, the Service must determine the compatibility of recreational uses that are possible and considered to be part of a new refuge. Based upon the requirements of law, a draft determination is made available to the public for review prior to making the final determination. In the case of a new refuge, Interim Compatibility Determinations are drafted and included in a Conceptual Management Plan.

Public use opportunities on the new Urban Refuge will include only non-consumptive uses such as wildlife observation, photography, environmental education, and interpretation. Hunting is not deemed safe on this urban Refuge and the property itself does not contain fishable waters.

The following public use regulations, common to many National Wildlife Refuges, will be adopted to achieve the management goals for the refuge:

- Public entry is permitted year-round in those areas shown on Refuge signs and brochures, with the exceptions of areas closed for restoration or to protect other sensitive resources.
- Use of the Refuge for any activity is limited to daylight hours only, except by Special Use Permit. Night use of environmental education or interpretation buildings will be allowed. No camping or overnight parking is permitted for the general public, but special youth oriented camping events maybe be allowed by Special Use Permit.
- Possessing or discharging firearms is prohibited.
- Collecting any plant or animal is prohibited unless otherwise specified.
- No person may search for, disturb, or remove from the Refuge any cultural artifact or other historical artifact.
- Entering or remaining on the Refuge while under the influence of alcohol or drugs is prohibited.
- Fires are not permitted except for agricultural and forestry management practices.
- Dogs and other pets must be kept under control at all times.
- Fishing, hunting, and trapping are prohibited.

### **Visitor Access**

Roads in the proposed Refuge area will be open for public use only for specific permitted access. Public off-road use of all-wheel-drive vehicles and all-terrain vehicles (ATVs) will be prohibited on the refuge. Trails will be developed for walking and hiking. Most stakeholders approached by the Service desire that a popular riverside trail, the Paseo del Bosque, be extended through this area from where it currently ends, about two miles north of the tract. If horseback or bicycle access to the bosque on the Rio Grande Valley State Park is not available nearby, the Service will evaluate the compatibility of providing this access along with the other priority Refuge uses. It may be possible for one or two non-vehicle bridges to be built between the tract and the bosque over the main irrigation channel contiguous to the western boundary of the tract and stakeholders have expressed enthusiasm for this concept. This would require additional funding and an agreement with the Middle Rio Grande Conservancy District.

The Refuge trail system will be fully accessible, allowing for visitors of all abilities to explore and experience the refuge. Trails will encourage lingering and observing, and be structured so that “outdoor classrooms” for student groups would not conflict with visitors seeking to explore on their own. Several of these outdoor classrooms would be strategically placed in areas provide shade and seating. Seating areas along the trails would also be provided, as would limited interpretive panels that discuss the unique Bosque and Rio Grande ecosystems and history.

The goal is to offer a variety of high quality opportunities for the public to observe nature, while minimizing potential conflict between humans and wildlife, or between user groups. Safety of pedestrian visitors will be a paramount consideration. Some areas may be closed to visitors at certain times of the year to protect restoration sites and sensitive wildlife and their habitat. Signs and maps would clearly indicate the open and closed areas of the Refuge. The Refuge will be open for access by non-motorized means only, except for wheelchairs or other power-driven devices designed primarily for use by an individual with a mobility disability for the main purpose of indoor and/or outdoor locomotion. The needs of physically challenged persons will be considered and included during access planning for any Refuge activity or facility.

### **Visitor Services**

If the Refuge is established a detailed Visitor Services Management Plan will be developed. Currently the vision for the Visitor Services component of the proposed Refuge consists of two related but distinct programs. The first is to provide environmental education opportunities to students of all ages, with specific targeted age groups that are currently underserved by other facilities in the Albuquerque area. At this point in time, information is still being collected to determine what age groups would benefit the most from these opportunities, but upper elementary aged students are generally the group that environmental education programs focus on, as school curriculum standards in science concentrate on the outdoor environment in these grades.

The philosophy of the environmental education program is one of “place based education”; that is, students would have repeated, in depth experiences in the environment that is found where they live – where they can become scientists and biologists and make a connection with their local environment. Secondly, environmental education at this site would take a multi-disciplinary approach, using the environment as a context for learning other subjects such as math, language arts and art as well as science. This authentic approach to learning has demonstrated that using the environment as the context for other subjects is an effective tool for higher achievement in standardized testing. An example of this approach is using the number of waterfowl observed on a wetland to teach fractions and percentages: of the 25 ducks seen today, what percentage are mallards? What percentage are wood ducks? With this methodology, not only do students learn basic biological skills (bird identification) but also are learning mathematical skills in a realistic, authentic manner.

It is anticipated that the Refuge environmental education program would focus on a smaller number of students, with repeat, in depth visits, rather than the traditional model of “one-shot” visits, where large numbers of students visit once, for a short period of time. The goal is high quality of education, not the number of student visits.

### **DEVELOPMENT OF A COMPREHENSIVE CONSERVATION PLAN**

Within 10 years of establishment, the Refuge will develop a Comprehensive Conservation Plan (CCP) in accordance with the requirements of the National Wildlife Refuge System Improvement Act of 1997. The CCP will review any interim plans that were developed and establish a management proposal that will include the establishment of long term-management goals, objectives, and strategies. These will include habitat management, recreational use

management (i.e. wildlife observation, wildlife photography, interpretation and education), water management, fire management and a program for inventorying, and monitoring habitat and wildlife populations.

The following interim compatibility determinations describe the uses, whether resources are available to manage them, their anticipated impacts, and any stipulations thought necessary to manage the activities and resources.

DRAFT

## INTERIM COMPATIBILITY DETERMINATION

**Use:** Wildlife Observation

**Refuge Name:** Urban National Wildlife Refuge, Bernalillo County, New Mexico

### **Establishing and Acquisition Authorities:**

The new Refuge would be established under the Refuge Recreation Act of September 28, 1962 (16 U.S.C. 460k-460k-4), as amended, and the Fish and Wildlife Act of 1956 (16 U.S.C. 742a-742j), as amended.

**Refuge Purpose:** The primary purpose for establishment is to create a Refuge “*suitable for— (1) incidental fish and wildlife-oriented recreational development, (2) the protection of natural resources, (3) the conservation of endangered species or threatened species*” ... The Refuge Recreation Act (16 U.S.C. § 460k-460k-4) authorized the Secretary of the Interior to administer Refuges, hatcheries and other conservation areas for recreational use, when such uses do not interfere with the area's primary purposes.

A secondary purpose would be “... *For the development, advancement, management, conservation, and protection of fish and wildlife resources.* (Fish and Wildlife Act of 1956 16 U.S.C. 742a-742j).

The primary goal for the Refuge would be “...to foster environmental awareness and outreach programs, and to develop an informed and involved citizenry that will support fish and wildlife conservation.” (USFWS Refuge Manual 341 FW 1).

### **National Wildlife Refuge System Mission:**

The mission of the 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.

### **Description of Use:**

#### **(a) What is the use?**

Wildlife observation encompasses the act of viewing, listening to, and watching animal behavior and habitats in as natural a setting as possible. This will involve individuals or groups hiking (or using power-driven mobility devices for those with mobility disabilities) within the Refuge. Observation sites, boardwalks, trails, and parking areas will be planned to provide safe and convenient areas for visitors to use. Visitors must comply with existing laws, regulations, and policies concerning access and harassment of wildlife.

#### **(b) Where is the use conducted?**

Unless specific areas are closed for sensitive species or other resource reasons, the entire Refuge would be open to this use. Trails and access roads would be used as the main points of access but some off trail use would be expected.

**(c) When is the use conducted?**

Refuge visitors may be allowed access for wildlife observation during daylight hours, year round, 7 days per week. Special nighttime activities such as Refuge sponsored owl watching or stargazing would be allowed. Wildlife observation activities will be managed and conducted at appropriate times and locations to minimize disturbance to wildlife and other natural resources.

**(d) How is the use conducted?**

The Refuge would develop a Visitor Services Management Plan in the future to facilitate and coordinate wildlife observation activities. This activity may be facilitated through other wildlife-dependent recreation activities (environmental education, interpretation, and photography) or secondary supportive uses, such as hiking. Visitors can benefit from wildlife observation by gaining an understanding of the interrelationships between humans and nature. Observation sites, boardwalks, trails, and parking areas will be planned for the future to provide safe and convenient areas for visitors to use. Visitors must comply with existing laws, regulations, and policies concerning access and harassment of wildlife when participating in any activity on the Refuge.

Individuals or organizations that bring clients to the Refuge for the purpose of wildlife observation, and charge a fee or tuition for their service are required to have a Special Use Permit issued by the Refuge.

**(e) Why is this use being proposed?**

The goal of the use is to offer a variety of high quality opportunities for the public to observe wildlife in their native habitats, while minimizing potential conflict between humans and wildlife, or between user groups. This use has the potential to create understanding, reveal relationships, examine systems, and explore how the natural world and human activities are intertwined. An objective of wildlife observation is to stimulate additional interest and positive action in visitors, which can also prepare citizens for participation in environmental and social decision-making that emphasizes natural resource conservation.

**Availability of Resources:**

Estimated start-up costs for the new unit are \$300,000 with estimated annual operations and maintenance costs of \$550,000 at full Refuge development. Construction costs for an education center are estimated at \$7,000,000.

After Refuge establishment the first staff position would most likely be for a Refuge manager position with a public use emphasis. Extensive partner involvement including the Bernalillo County Open Space Program, and a Friends Group would be developed to help staff, facilitate, and manage visitation.

**Anticipated Impacts of the Use:**

Short and Long-term Impacts:

The use of roadways and trails to facilitate wildlife observation may result in some environmental impacts to the Refuge, its habitat, and wildlife species. Potential impacts from visitors engaged in wildlife observation include damage to vegetation, littering, increased

road/trail maintenance, trespass, and disturbance to wildlife. The Refuge may consider confining the use to designated roads and trails designed to accommodate the use to minimize resource impacts or conflict between user groups.

Alternatively, wildlife observation may result in long-term beneficial impacts to the human environment. This use may increase the viewers' understanding and appreciation of wildlife and their habitat needs as well as the role of the National Wildlife Refuge System in resource conservation. Wildlife observation will offer opportunities for the public to view wildlife in a variety of habitats occurring on the Refuge while enhancing the overall Refuge System mission.

**Cumulative Impacts:**

There are no anticipated adverse cumulative impacts resulting from wildlife observation. Ultimately, this activity when combined with other public use opportunities on the Refuge, will result in beneficial cumulative impacts on the human environment. The wide variety of public use opportunities available on the Refuge will increase public awareness about conservation issues and the National Wildlife Refuge System. This will benefit the Service's overall mission and the Refuge purposes.

**Public Review and Comment:**

The Service is distributing this interim Compatibility Determination for a 30-day public review as part of the draft Land Protection Plan and Environmental Assessment. The public is encouraged to provide comments on the proposed use. These comments will be considered in the decision-making process.

**Determination (check one below):**

- Use is Not Compatible
- Use is Compatible with Following Stipulations

**Stipulations Necessary to Ensure Compatibility:**

The Refuge will implement the following stipulations to ensure that wildlife observation remains a compatible use:

1. Seasonal closures relative to sensitive wildlife populations or vegetation restoration may also apply.
2. Night access by the general public to the Refuge will be prohibited, except by Special Use Permit for appropriate activities such as owl watching or star gazing events. Night events held indoors at the planned public facilities would be allowed.
3. Except by Special Use Permit, vehicle access by the public would be prohibited beyond the facilities and designated parking area(s).
4. The Refuge will limit and control Refuge access through enforcement of Refuge regulations, signage, and education of the public as to the purpose of the Refuge and responsibilities of visitors. These actions also help ensure visitor safety and quality of experience.
5. Individuals or organizations that bring clients to the Refuge for the purpose of interpretation and charge a fee or tuition for their service are required to have a Special Use Permit issued by the Refuge. This requirement ensures that private businesses are not unfairly making a profit from public lands and provides a mechanism for the Refuge to regulate where and when commercial activities occur.

**Justification:**

As defined by the National Wildlife Refuge System Improvement Act of 1997, wildlife-dependent recreational uses may be authorized on a Refuge when they are compatible and not inconsistent with public safety. Wildlife observation is included as one of these six wildlife-dependent activities, which are to receive enhanced and priority consideration in Refuge planning and management. Regulated wildlife observation as described above and consistent with the management direction will provide the visitor with a chance to experience wildlife first-hand and develop knowledge about species' behaviors, adaptations, and habitat requirements while also developing an understanding of the Refuge's role in wildlife and habitat conservation through the National Wildlife Refuge System. This activity will not conflict with any of the other priority public uses or adversely impact biological resources. Therefore, through the compatibility determination process, the Service has determined that wildlife observation, in accordance with the stipulations provided above, will not materially interfere with or detract from the fulfillment of the National Wildlife Refuge System mission or the purposes of the Refuge. Instead, this use directly supports the purpose for which the Refuge was established by providing an opportunity for visitors to experience nature so they can better understand and support conservation of all wildlife and their habitats.

**Signature:** Refuge Manager \_\_\_\_\_  
(Signature and Date)

**Concurrence:** Regional Chief \_\_\_\_\_  
(Signature and Date)

**Mandatory 15-year Re-Evaluation Date:** \_\_\_\_\_

## INTERIM COMPATIBILITY DETERMINATION

**Use:** Photography

**Refuge Name:** Urban National Wildlife Refuge, Bernalillo County, New Mexico

### **Establishing and Acquisition Authorities:**

The new Refuge would be established under the Refuge Recreation Act of September 28, 1962 (16 U.S.C. 460k-460k-4), as amended, and the Fish and Wildlife Act of 1956 (16 U.S.C. 742a-742j), as amended.

**Refuge Purpose:** The primary purpose for establishment is to create a Refuge “*suitable for— (1) incidental fish and wildlife-oriented recreational development, (2) the protection of natural resources, (3) the conservation of endangered species or threatened species*” ... The Refuge Recreation Act (16 U.S.C. § 460k-460k-4) authorized the Secretary of the Interior to administer Refuges, hatcheries and other conservation areas for recreational use, when such uses do not interfere with the area's primary purposes.

A secondary purpose would be “... *For the development, advancement, management, conservation, and protection of fish and wildlife resources.* (Fish and Wildlife Act of 1956 16 U.S.C. 742a-742j).

The primary goal for the Refuge would be “...to foster environmental awareness and outreach programs, and to develop an informed and involved citizenry that will support fish and wildlife conservation.” (USFWS Refuge Manual 341 FW 1).

### **National Wildlife Refuge System Mission:**

The mission of the 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.

### **Description of Use:**

#### **(a) What is the use?**

Photography could be an important wildlife-dependent recreational use on the Refuge. This is a popular public use on many Refuges and can include a variety of formats (i.e., still, video, or movie). The Refuge could offer high quality wildlife viewing and photography.

#### **(b) Where is the use conducted?**

Unless specific areas are closed for sensitive species, restoration, or other resource reasons, the entire Refuge would be open to this use. Trails and roads would be used as the main points of access but some off trail use would be expected.

#### **(c) When is the use conducted?**

Refuge visitors may be allowed access for photography during daylight hours, year round, 7 days

per week. Special nighttime activities such as Refuge sponsored owl watching or stargazing and would be allowed. Photography activities will be managed and conducted at appropriate times and locations to minimize disturbance to wildlife and other natural resources.

**(d) How is the use conducted?**

This activity may be facilitated through other wildlife-dependent recreation activities (environmental education, interpretation, and wildlife observation) or secondary supportive uses such as hiking. Visitors could benefit by gaining an understanding of the interrelationships between humans and nature. Observation sites, boardwalks, trails, and parking areas will be planned for the future to provide safe and convenient areas for visitors to use. Visitors must comply with existing laws, regulations, and policies concerning access and harassment of wildlife when participating in any activity on the Refuge.

Individuals or organizations that bring clients to the Refuge for the purpose of photography and charge a fee or tuition for their service would be required to have a Special Use Permit issued by the Refuge.

**(e) Why is this use being proposed?**

The goal of the activity will be to offer a variety of high quality opportunities to photograph wildlife in their native habitats and nature in general while minimizing potential conflict between user groups and between humans and wildlife. The use can help connect people to the land, foster an appreciation of the resources, and facilitate outdoor, nature-based recreation. This use has the potential to create understanding, reveal relationships, examine systems, and explore how the natural world and human activities are intertwined. An objective of the use is to stimulate additional interest and positive action in visitors, which can also prepare citizens to participate in environmental and social decision-making emphasizing natural and cultural resource conservation.

**Availability of Resources:**

Estimated start-up costs for the new unit are \$300,000 with estimated annual operations and maintenance costs of \$550,000 at full Refuge development. Construction costs for an education center are estimated at \$7,000,000.

After Refuge establishment the first staff position would most likely be for a Refuge manager position with a public use emphasis. Extensive partner involvement including the Bernalillo County Open Space Program, and a Friends Group would be developed to help staff, facilitate, and manage visitation.

**Anticipated Impacts of the Use:**

Short and Long-term Impacts:

The use of roadways and trails to facilitate photography may result in some environmental impacts to the Refuge, its habitat, and wildlife species. Potential impacts from visitors engaged in photography include damage to vegetation, littering, increased road/trail maintenance, trespass, and disturbance to wildlife. The Refuge may consider confining the use to designated roads and trails designed to accommodate the use to minimize resource impacts or conflict

between user groups. Therefore, negative impacts to natural resources would be considered minor.

Alternatively, photography may result in long-term beneficial impacts to the human environment. This use may increase the viewers' understanding and appreciation of wildlife and their habitat needs while allowing visitors to capture images that preserve their Refuge experience for years to come. In this sense, photography supports interpretation and heightened understanding of the Refuge's role in wildlife conservation.

**Cumulative Impacts:**

There are no anticipated adverse cumulative impacts resulting from photography. Ultimately, this activity will add to public use opportunities on the Refuge, which together will result in beneficial cumulative impacts on the human environment. The wide variety of public use opportunities available on the Refuge will increase public awareness about conservation issues and the National Wildlife Refuge System. This will benefit the Service's overall mission and the Refuge purpose.

**Public Review and Comment:**

The Service is distributing this interim Compatibility Determination for a 30-day public review as part of the draft Land Protection Plan and Environmental Assessment. The public is encouraged to provide comments on the proposed use. These comments will be considered in the decision-making process.

**Determination (check one below):**

- Use is Not Compatible  
 Use is Compatible with Following Stipulations

**Stipulations Necessary to Ensure Compatibility:**

The Refuge will implement the following stipulations to ensure that photography remains a compatible use:

1. Seasonal closures relative to sensitive wildlife populations or vegetation restoration may also apply.
2. Night access by the general public to the Refuge will be prohibited, except by Special Use Permit for appropriate activities such as owl watching or star gazing events. Night events held indoors at the planned public facilities would be allowed.
3. Except by Special Use Permit, vehicle access by the public would be prohibited beyond the facilities and designated parking area(s).
4. The Refuge will limit and control Refuge access through enforcement of Refuge regulations, signage, and education of the public as to the purpose of the Refuge and responsibilities of visitors. These actions also help ensure visitor safety and quality of experience.
5. Commercial photographers, individuals, or organizations that bring clients to the Refuge for the purpose of photography and charge a fee or tuition for their service are required to have a Special Use Permit issued by the Refuge. This requirement ensures that private businesses are not unfairly making a profit from public lands and provides a mechanism for the Refuge to regulate where and when commercial activities occur.

**Justification:**

As defined by the National Wildlife Refuge System Improvement Act of 1997, wildlife-dependent recreational uses may be authorized on a Refuge when they are compatible and not inconsistent with public safety. Photography is included as one of these six wildlife-dependent activities, which are to receive enhanced and priority consideration in Refuge planning and management. Regulated photography as described above and consistent with the management direction will provide the visitor with a chance to experience wildlife first-hand and develop knowledge about species' behaviors, adaptations, and habitat requirements while also developing an understanding of the refuge's role in wildlife and habitat conservation through the National Wildlife Refuge System. This activity will not conflict with any of the other priority public uses or adversely impact biological resources. Therefore, through the compatibility determination process, the Service has determined that photography, in accordance with the stipulations provided above, will not materially interfere with or detract from the fulfillment of the National Wildlife Refuge System mission or the purposes of the Refuge. Instead, this use directly supports the purpose for which the Refuge was established by providing an opportunity for visitors to experience nature so they can better understand and support conservation of all wildlife and their habitats.

**Signature:** Refuge Manager \_\_\_\_\_  
(Signature and Date)

**Concurrence:** Regional Chief \_\_\_\_\_  
(Signature and Date)

**Mandatory 15-year Re-Evaluation Date:** \_\_\_\_\_

## INTERIM DRAFT COMPATIBILITY DETERMINATION

**Use:** Environmental Education

**Refuge Name:** Urban National Wildlife Refuge, Bernalillo County, New Mexico

### **Establishing and Acquisition Authorities:**

The new Refuge would be established under the Refuge Recreation Act of September 28, 1962 (16 U.S.C. 460k-460k-4), as amended, and the Fish and Wildlife Act of 1956 (16 U.S.C. 742a-742j), as amended.

**Refuge Purpose:** The primary purpose for establishment is to create a Refuge “*suitable for— (1) incidental fish and wildlife-oriented recreational development, (2) the protection of natural resources, (3) the conservation of endangered species or threatened species*” ... The Refuge Recreation Act (16 U.S.C. § 460k-460k-4) authorized the Secretary of the Interior to administer Refuges, hatcheries and other conservation areas for recreational use, when such uses do not interfere with the area's primary purposes.

A secondary purpose would be “... *For the development, advancement, management, conservation, and protection of fish and wildlife resources.* (Fish and Wildlife Act of 1956 16 U.S.C. 742a-742j).

The primary goal for the Refuge would be “...to foster environmental awareness and outreach programs, and to develop an informed and involved citizenry that will support fish and wildlife conservation.” (USFWS Refuge Manual 341 FW 1).

### **National Wildlife Refuge System Mission:**

The mission of the 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.

### **Description of Use:**

#### **(a) What is the use?**

The Region’s vision is to develop an extensive Environmental Education (EE) program that serves a significant proportion of the nearby urban population, especially the under-served South Valley area of Albuquerque. The Service and/or its partners plan to construct and utilize an EE facility to provide extensive programs and interpretive opportunities. The use typically involves classroom instruction as well as some time for field observations and activities related to the resources being protected or restored at the site.

#### **(b) Where is the use conducted?**

Most programs will begin at an EE Center to be developed in the future, but then move outdoors to various parts of the Refuge. It is anticipated that the building will be built along the eastern edge of the property where there are currently buildings and other farm infrastructure. EE

related outdoor uses may occur throughout the refuge. These will be focused along existing access roads, trails, or parking areas developed in the future but some may occur off trail.

**(c) When is the use conducted?**

Refuge visitors would be allowed access for EE activities during daylight hours, year round, 7 days per week. Special nighttime activities such as Refuge sponsored owl watching or stargazing and indoor activities at developed facilities would be allowed. Activities outside of the classroom will be designed and conducted at appropriate times and locations to minimize disturbance to wildlife and other natural resources.

**(d) How is the use conducted?**

The Refuge would develop a Visitor Services Management Plan in the future to facilitate and coordinate EE. EE programs could be controlled and coordinated by FWS staff and class sizes limited to ensure quality programming. EE programs should emphasize the mission of the Service, general wildlife appreciation and conservation, restoration, sustainable land use, and developing a conservation ethic in future generations.

This activity may be facilitated through other wildlife-dependent recreation activities (interpretation, wildlife observation, and photography) or secondary supportive uses such as hiking. Visitors could benefit by gaining an understanding of the interrelationships between humans and nature. Observation sites, boardwalks, trails, and parking areas will be planned for the future to provide safe and convenient areas for visitors to use. Visitors must comply with existing laws, regulations, and policies concerning access and harassment of wildlife when participating in any activity on the Refuge.

**(e) Why is this use being proposed?**

Through a learning process that employs nature as teacher, students gain an appreciation of natural systems, an awareness of environmental issues, and learn the importance of a healthy environment to humans as well as wildlife. Students apply the knowledge to their daily lives and make changes based on that knowledge. Staff-conducted teaching prepares students to participate in environmental and social decision-making to sustain natural and cultural resources.

In the long-term the program will enhance appreciation of the Refuge's role in the National Wildlife Refuge System, increase support for the preservation of natural diversity of flora and fauna on Refuge lands, and create an educated constituency supporting Refuges and biodiversity preservation. Ultimately, the EE program is a cost-effective way to educate Refuge visitors and build public awareness while providing individuals with a high quality Refuge experience.

Recent trends in environmental education show that adults are lifelong learners and their observation, technical skills, and knowledge are refined over a lifetime. Environmental education should not be construed as education just for K-12 school grades, but rather for individuals of all ages wishing to better understand their local ecology. Bernalillo County's Open Space program gears its programming toward lifelong learning.

**Availability of Resources:**

Estimated start-up costs for the new unit are \$300,000 with estimated annual operations and maintenance costs of \$550,000 at full Refuge development. Construction costs for an education center are estimated at \$7,000,000.

After Refuge establishment the first staff position would most likely be for a Refuge manager position with a public use emphasis. Extensive partner involvement including the Bernalillo County Open Space Program, and a Friends Group would be developed to help staff, facilitate, and potentially fund parts of the EE program. If the EE program grows to the level currently envisioned, staff additions may become necessary to manage the program.

**Anticipated Impacts of the Use:**

Short and Long-term Impacts:

The overall impacts to Refuge resources resulting from the EE program will be minimal. The envisioned building of the EE Center will not increase the developed footprint of the Refuge as there are currently residential and farm facilities in existence in the same area. There may be some minimal disturbance to wildlife resulting from large groups of students visiting the Refuge, but the level of disturbance is unlikely to interfere with production or population maintenance. Travel along trails may cause trampling, erosion, and plant damage, thus resulting in habitat degradation. These impacts are likely to be minimal and short-term, occurring only in close proximity to the EE Center and on trails designed for this use. Offering these activities does not conflict with the primary objectives of the Refuge.

Implementation of the EE program will ultimately continue to provide a benefit to local residents by developing a higher level of environmental knowledge and awareness among students. In addition, the program will provide long-term benefits for the Refuge itself by promoting environmental stewardship in students.

Cumulative Impacts:

There are no anticipated adverse cumulative impacts resulting from environmental education. Ultimately, this activity will add to public use opportunities on the Refuge, which together will result in beneficial cumulative impacts on the human environment. The wide variety of public use opportunities anticipated on the Refuge will increase public awareness about conservation issues and the National Wildlife Refuge System. This will contribute to the Service’s overall mission and the Refuge purposes.

**Public Review and Comment:**

The Service is distributing this interim Compatibility Determination for a 30-day public review as part of the draft Land Protection Plan and Environmental Assessment. The public is encouraged to provide comments on the proposed use. These comments will be considered in the decision-making process.

**Determination (check one below):**

- Use is Not Compatible
- Use is Compatible with Following Stipulations

**Stipulations Necessary to Ensure Compatibility:**

The Refuge will implement the following stipulations to ensure that EE remains a compatible use:

1. Seasonal closures relative to sensitive wildlife populations or vegetation restoration may also apply.
2. Night access by the general public to the Refuge will be prohibited, except by Special Use Permit for appropriate activities such as owl watching or star gazing events. Night events held indoors at the planned public facilities would be allowed.
3. Except by Special Use Permit, vehicle access by the public would be prohibited beyond the facilities and designated parking area(s).
4. The Refuge will limit and control Refuge access through enforcement of Refuge regulations, signage, and education of the public as to the purpose of the Refuge and responsibilities of visitors. These actions also help ensure visitor safety and quality of experience.
5. Individuals or organizations that bring clients to the Refuge for the purpose of environmental education and charge a fee or tuition for their service are required to have a Special Use Permit issued by the Refuge. This requirement ensures that private businesses are not unfairly making a profit from public lands and provides a mechanism for the Refuge to regulate where and when commercial activities occur.

**Justification:**

As defined by the National Wildlife Refuge System Improvement Act of 1997, wildlife-dependent recreational uses may be authorized on a Refuge when they are compatible and not inconsistent with public safety. Environmental education is included as one of these six wildlife-dependent activities, which are to receive enhanced and priority consideration in Refuge planning and management and will increase the public’s awareness, understanding, and appreciation of fish and wildlife resources. This activity will not conflict with any of the other priority public uses or adversely impact biological resources. Therefore, through the compatibility determination process, the Service has determined that environmental education, in accordance with the stipulations provided above, will not materially interfere with or detract from the fulfillment of the National Wildlife Refuge System mission or the purposes of the Refuge.

**Signature:** Refuge Manager \_\_\_\_\_  
(Signature and Date)

**Concurrence:** Regional Chief \_\_\_\_\_  
(Signature and Date)

**Mandatory 15-year Re-Evaluation Date:** \_\_\_\_\_

## INTERIM COMPATIBILITY DETERMINATION

**Use:** Interpretation

**Refuge Name:** Urban National Wildlife Refuge, Bernalillo County, New Mexico

### **Establishing and Acquisition Authorities:**

The new Refuge would be established under the Refuge Recreation Act of September 28, 1962 (16 U.S.C. 460k-460k-4), as amended, and the Fish and Wildlife Act of 1956 (16 U.S.C. 742a-742j), as amended.

**Refuge Purpose:** The primary purpose for establishment is to create a Refuge “*suitable for— (1) incidental fish and wildlife-oriented recreational development, (2) the protection of natural resources, (3) the conservation of endangered species or threatened species*” ... The Refuge Recreation Act (16 U.S.C. § 460k-460k-4) authorized the Secretary of the Interior to administer Refuges, hatcheries and other conservation areas for recreational use, when such uses do not interfere with the area's primary purposes.

A secondary purpose would be “... *For the development, advancement, management, conservation, and protection of fish and wildlife resources.* (Fish and Wildlife Act of 1956 16 U.S.C. 742a-742j).

The primary goal for the Refuge would be “...to foster environmental awareness and outreach programs, and to develop an informed and involved citizenry that will support fish and wildlife conservation.” (USFWS Refuge Manual 341 FW 1).

### **National Wildlife Refuge System Mission:**

The mission of the 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.

### **Description of Use:**

#### **(a) What is the use?**

Interpretation is a process that aims to reveal meanings and relationships through the use of original objects by firsthand experience or illustrative media rather than simply to communicate factual information. This use typically involves persons or groups of varying ages observing on-site presentations by expert guides about biological, ecological, or cultural topics pertinent to the site or the Refuge System in general.

#### **(b) Where is the use conducted?**

Most interpretive programs will begin at an EE Center to be developed in the future, but then move outdoors to various parts of the Refuge. It is anticipated that the building will be built along the eastern edge of the property where there are currently farm related structures. Outdoor interpretive activities may occur throughout the refuge. These will be focused along existing

access roads, trails, or parking areas developed in the future but some may occur off trail.

**(c) When is the use conducted?**

Refuge visitors may be allowed access for interpretive activities during daylight hours, year round, 7 days per week. Special nighttime activities such as Refuge sponsored owl watching or stargazing and indoor activities at developed facilities would be allowed. Outdoor interpretive activities will be designed and conducted at appropriate times and locations to minimize disturbance to wildlife and other natural resources.

**(d) How is the use conducted?**

The Refuge would develop a Visitor Services Management Plan in the future to facilitate and coordinate interpretative activities. Interpretation occurs through signage, informational kiosks, brochures, exhibits, demonstrations, oral presentations, audiovisual media, and conversations with staff. Interpretation is both educational and recreational in nature.

This activity may be facilitated through other wildlife-dependent recreation activities (environmental education, wildlife observation, and photography) or secondary supportive uses such as hiking. Visitors could benefit from interpretation by gaining an understanding of the interrelationships between humans and nature. Observation sites, boardwalks, trails, and parking areas will be planned for the future to provide safe and convenient areas for visitors to use. Visitors must comply with existing laws, regulations, and policies concerning access and harassment of wildlife when participating in any activity on the Refuge.

Individuals or organizations that bring clients to the Refuge for the purpose of interpretation, and charge a fee or tuition for their service would be required to have a Special Use Permit issued by the Refuge.

**(e) Why is this use being proposed?**

The primary goals of an Interpretation Program are to help connect people to the land, to foster an appreciation of natural resources and the historical/cultural context of the site, and to facilitate outdoor, nature-based recreation. This use has the potential to create understanding, reveal relationships, examine systems, and explore how the natural world and human activities are intertwined. An objective of interpretation is to stimulate additional interest and positive action in visitors, which can also prepare citizens to participate in environmental and social decision-making emphasizing natural and cultural resource conservation.

**Availability of Resources:** Estimated start-up costs for the new unit are \$300,000 with estimated annual operations and maintenance costs of \$550,000 at full Refuge development. Construction costs for an education center are estimated at \$7,000,000.

After Refuge establishment the first staff position would most likely be for a Refuge manager position with a public use emphasis. Extensive partner involvement including the Bernalillo County Open Space Program, and a Friends Group would be developed to help staff, facilitate, and potentially fund parts of the interpretation program. Interpretive tours are cost-effective, as labor is often contributed through partners and the volunteer efforts of Friends Groups or similar entities.

**Anticipated Impacts of the Use:****Short and Long-term Impacts:**

The use of roadways and trails to facilitate interpretation may result in some environmental impacts to the Refuge, its habitat, and wildlife species. Potential impacts from visitors engaged in interpretation may include damage to vegetation, littering, increased road/trail maintenance, trespass on adjacent private lands, and disturbance to wildlife. The Refuge may consider confining the use to designated roads and trails designed to accommodate the use to minimize resource impacts or conflict between user groups. The Refuge exterior boundary will be fenced to minimize potential trespass on to adjacent properties.

Active interpretive contacts with the public would generally be facilitated by Refuge staff or volunteers trained by Refuge staff. This would give the Refuge some level of influence over the participants' behavior and help avoid negatively impacting resources. In addition, the Refuge would maintain control over the timing and location of this activity through the requirements for Special Use Permits when commercial interpretive events occur and when group sizes are large. All of these impacts are expected to be negligible to minor, site-specific, and short-term.

Interpretation may also result in long-term beneficial impacts to the visitor experience and the mission of the National Wildlife Refuge System. The Visitor Center facilities, publications, audio-visual media, and public speeches will increase public awareness of the Refuge and local and national conservation issues. This use may increase visitors' understanding and appreciation of wildlife and their habitat needs as well as the role of the National Wildlife Refuge System in resource conservation. The additional interpretive facilities will offer increased opportunities for the public to observe, understand, and appreciate nature while gaining an understanding of the overall Refuge System mission.

**Cumulative Impacts:**

There are no anticipated adverse cumulative impacts resulting from interpretation. Ultimately, this activity will add to public use opportunities on the Refuge, which together will result in beneficial cumulative impacts on the human environment. The wide variety of public use opportunities anticipated on the Refuge will increase public awareness about conservation issues and the National Wildlife Refuge System. This will contribute to the Service's overall mission and the Refuge purposes.

**Public Review and Comment:**

The Service is distributing this interim Compatibility Determination for a 30-day public review as part of the draft Land Protection Plan and Environmental Assessment. The public is encouraged to provide comments on the proposed use. These comments will be considered in the decision-making process.

**Determination (check one below):**

- Use is Not Compatible  
 Use is Compatible with Following Stipulations

**Stipulations Necessary to Ensure Compatibility:**

The Refuge will implement the following stipulations to ensure that interpretation remains a compatible use:

1. Seasonal closures relative to sensitive wildlife populations or vegetation restoration may also apply.
2. Night access by the general public to the Refuge will be prohibited, except by Special Use Permit for appropriate activities such as owl watching or star gazing events. Night events held indoors at the planned public facilities would be allowed.
3. Except by Special Use Permit, vehicle access by the public would be prohibited beyond the facilities and designated parking area(s).
4. The Refuge will limit and control Refuge access through enforcement of Refuge regulations, signage, and education of the public as to the purpose of the Refuge and responsibilities of visitors. These actions also help ensure visitor safety and quality of experience.
5. Individuals or organizations that bring clients to the Refuge for the purpose of interpretation and charge a fee or tuition for their service are required to have a Special use Permit issued by the Refuge. This requirement ensures that private businesses are not unfairly making a profit from public lands and provides a mechanism for the Refuge to regulate where and when commercial activities occur.

**Justification:**

As defined by the National Wildlife Refuge System Improvement Act of 1997, wildlife-dependent recreational uses may be authorized on a Refuge when they are compatible and not inconsistent with public safety. Interpretation is included as one of the six wildlife-dependent activities, which are to receive enhanced and priority consideration in Refuge planning and management. Regulated interpretation as described above will provide the visitor with a chance to experience the Refuge in a high-quality, safe, wholesome, and enjoyable recreational environment. This will ultimately further the visitors’ understanding of the Refuge’s role in wildlife and habitat conservation through the National Wildlife Refuge System. This activity will not conflict with any of the other priority public uses or adversely impact biological resources. Therefore, through the compatibility determination process, the Service has determined that interpretation, in accordance with the stipulations provided above, will not materially interfere with or detract from the fulfillment of the National Wildlife Refuge System mission or the purposes of the Refuge. Instead, this use directly supports the purpose for which the Refuge was established by educating visitors so they can better understand and support conservation of all wildlife and their habitats.

**Signature:** Refuge Manager \_\_\_\_\_  
(Signature and Date)

**Concurrence:** Regional Chief \_\_\_\_\_  
(Signature and Date)

**Mandatory 15-year Re-Evaluation Date:** \_\_\_\_\_

## Appendix 3: INTRA-SERVICE SECTION 7 BIOLOGICAL EVALUATION FORM

### DRAFT

**Originating Person:** Steve Kettler

**Telephone number:** 505-248-7403

**Project Name:** proposed new Refuge establishment (urban Refuge, Bernalillo County, New Mexico) and preliminary management

**Date:** 20 June 2011

**I. Region:** Southwest, Region 2

**II. Service Activity (Program):** Refuges

**III. Pertinent Species and Habitat:**

**A. Listed species and/or their critical habitat within the action area:**

Southwestern willow flycatcher

Rio Grande silvery minnow

**B. Proposed species and/or proposed critical habitat within the action area:** none

**C. Candidate species within the action area:**

Yellow-billed cuckoo

New Mexico jumping mouse

**IV. Geographic area or station name and action:**

The project site is located in Bernalillo County, New Mexico approximately 5 miles south of downtown Albuquerque. The proposed new Refuge would be established with purchase of the 570-acre Price's Dairy and to associated senior water rights. The Refuge would be established as the Middle Rio Grande Unit of Bosque del Apache National Wildlife Refuge.

**V. Location**

**A. County and state:** Bernalillo, New Mexico

**B. Latitude-longitude:** 34.798730 degrees N – 106.675154 degrees W

**C. Distance (miles) and direction to nearest town:**

Approximately 5 miles south of downtown Albuquerque and east of the Rio Grande, in the South Valley.

**D. Species/habitat occurrence:**

The property is immediately east of the bosque adjacent to Rio Grande Valley State Park. Canals and levees separate the property from the active floodplain. The 570-acre parcel was used as a dairy from the 1920's to the 1990's and since then has been cultivated and used for alfalfa and grass hay production. Native vegetation is very limited and mainly confined to the periphery of the property where there are scattered small patches of native and non-native trees and shrubs.

The southwestern willow flycatcher occurs on the floodplain along the Rio Grande. The action area is not within designated critical habitat. The nearest nesting location of the southwestern willow flycatcher is approximately 10 miles to the south of the action area. Currently, habitat at the property itself is unsuitable for the southwestern willow flycatcher. Restoration envisioned for the property would be likely to create some suitable migratory stopover habitat for the species.

Rio Grande silvery minnow critical habitat occurs approximately 800 feet west of the property (on the main channel of the Rio Grande) but the property itself has no natural waterways and is unsuitable for the Rio Grande silvery minnow. Water rights purchased with the property will be used for restoration of native vegetation on site and the Service is exploring the possibility of utilizing water in excess of that needed for on-site restoration for other restoration efforts in the Middle Rio Grande basin. This may indirectly benefit Rio Grande silvery minnow by improving riparian habitat adjacent to Rio Grande silvery minnow critical habitat.

The New Mexico jumping mouse occurs in relatively dense riparian vegetation. Currently, habitat at the property is unsuitable for the New Mexico jumping mouse. Restoration envisioned for the property may create some suitable habitat for the species.

Currently, habitat at the property itself is unsuitable for the yellow-billed cuckoo. This species was uncommon and considered a rare migrant with no evidence of summering in the Middle Rio Grande during one year of a recent study (Hawks Aloft 2010).

#### **VI. Description of proposed action:**

The proposed new Refuge would be established with purchase of the 570-acre Price's Dairy and would include purchase of the senior water rights. The purchase of the property and designation as a Refuge may be phased over the course of several years.

The preliminary restoration plan is to convert the majority of the farm fields to a mix of native habitats including bosque woodlands, open savanna, wet meadows, and small wetlands. Water rights purchased with the property will be used to irrigate restoration areas. Restoration and development of bosque or savanna habitats may take years or even decades.

Development of buildings and other infrastructure is anticipated to occur on the east side of the property where there are currently numerous farm and residential buildings and other farm infrastructure.

Extensive outdoor education and interpretation programs will be developed, and providing outdoor recreation opportunities such as hiking, bird watching, and nature photography will be a focus of the Refuge. Trails will be developed to access the property for these activities.

#### **VII. Determination of Effects:**

The proposed action "may affect, is not likely to adversely affect" the Southwestern willow flycatcher and the New Mexico jumping mouse. In fact, the proposed action is likely to result in

a beneficial effect to these species by promoting the establishment of potentially suitable habitat on the newly proposed Urban Refuge, Bernalillo County, New Mexico.

The proposed action “may affect, is not likely to adversely affect” the Rio Grande silvery minnow. In fact, the proposed action may result in a beneficial effect if excess irrigation water is used to improve habitat adjacent to the Rio Grande in other parts of the Middle Rio Grande.

The proposed action will have “No effect” on the yellow-billed cuckoo.

**VIII. Effect determination and response requested: [\* = optional]**

**A. Listed species/designated critical habitat:**

<u>Determination</u>	<u>Response Requested</u>
No effect on species/critical habitat (species: Southwestern willow flycatcher)	_____Concurrence
May affect, is not likely to adversely affect species /critical habitat (species: Southwestern willow flycatcher)	___X___Concurrence
May affect, is likely to adversely affect species /critical habitat (species: Southwestern willow flycatcher)	_____Formal Consultation

**Listed species/designated critical habitat:**

<u>Determination</u>	<u>Response Requested</u>
No effect on species/critical habitat (species: Rio Grande silvery minnow)	_____Concurrence
May affect, is not likely to adversely affect species /critical habitat (species: Rio Grande silvery minnow)	___X___Concurrence
May affect, is likely to adversely affect species /critical habitat (species: Rio Grande silvery minnow)	_____Formal Consultation

**B. Candidate species:**

<u>Determination</u>	<u>Response Requested</u>
No effect on candidate species species: (Yellow-billed cuckoo)	_____Concurrence

Is not likely to jeopardize candidate species  
(species: (Yellow-billed cuckoo)

Concurrence

Is likely to jeopardize candidate species  
(species: (Yellow-billed cuckoo)

Formal Consultation

**Candidate species:**

Determination

Response Requested

No effect on candidate species  
species: (species: New Mexico jumping mouse)

Concurrence

Is not likely to jeopardize candidate species  
(species: New Mexico jumping mouse)

Concurrence

Is likely to jeopardize candidate species  
(species: (New Mexico jumping mouse)

Formal Consultation

\_\_\_\_\_  
Date

Signature

Regional Chief

**IX. Reviewing ESFO Evaluations:**

A. Concurrence: \_\_\_\_\_ Nonconcurrency: \_\_\_\_\_

B. Formal consultation required: \_\_\_\_\_

C. Conference required \_\_\_\_\_

D. Informal conference required \_\_\_\_\_

E. Remarks (attach additional pages as needed):

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

Field Supervisor  
New Mexico Ecological Services Field Office

## **Appendix 4: RESPONSE TO SCOPING COMMENTS**

### Traffic and vehicular access to the proposed Refuge

The Service will work with Bernalillo County Public Works Division to design safe and efficient access to the facility and will consider effects on road conditions and maintenance, traffic quantity and patterns, and neighboring residential areas and will attempt to minimize negative impacts through signage or road upgrades. A Traffic Impact Analysis prepared by an experienced and licensed traffic engineer may be required to identify any necessary road improvements.

### Trespass onto adjacent private properties, security

Appropriate fencing would be constructed along property boundaries. Boundary signs will be located along the perimeter of the Refuge. On-site security patrols and/or electronic security measures to safeguard any improvements will be implemented as necessary.

### Increasing numbers of birds to the site that may pose a hazard to air traffic passing over the site to or from the Albuquerque International Sunport

Management and habitat restoration efforts will focus on recreating a variety of native habitats that Service biologists suspect will support fewer sandhill cranes, arctic nesting geese, Canada geese, and other waterfowl than presently occur on the grasslands and alfalfa fields maintained by the current farming operation. Management will favor neotropical migrants, raptors, and other native wildlife species and fewer geese, cranes, and other waterfowl that may pose a greater hazard of bird strikes on aircraft. The Service intends to manage the Refuge consistently with recommendations outlined in the 2003 Memorandum of Agreement between the Federal Aviation Administration, the Service and others to address aircraft-wildlife strikes. In addition, the Service will continue to consult with officials at the Albuquerque International Sunport.

### The impacts of noise from air traffic using the Albuquerque International Sunport on the outdoor experience

Since the site is under the flight path for the southwest runway, aircraft periodically overfly the property approximately 5000 feet above ground level. A wide variety of background noise is characteristic of an urban Refuge experience and the Service is confident that habitats and visitor facilities can be designed to provide a high quality outdoor experience.

### Changes in types of habitat available on the property and subsequent changes in types and numbers of wildlife using the site

Over time habitat at the site would change from grass and alfalfa hay meadows to a mix of native habitats ranging from bosque woodlands, open savanna, meadows, and small wetlands. This will likely reduce, but not totally preclude, use by sandhill cranes, arctic nesting geese, Canada geese, and other waterfowl that feed on the open grasslands and alfalfa fields maintained by the current hay farming operation. Restored habitats will benefit neotropical migrants, raptors, songbirds, and other native wildlife species that prefer more native habitats.

### Presence of contaminants from historic agricultural operations

The Service rarely pursues acquisition of sites with substantial contaminant problems. The Trust for Public Land contracted to have a Level 1 environmental site assessment done and this

assessment did not identify any problems. The Service conducts an environmental site assessment for all proposed real property acquisitions. Since no potential environmental problems were identified in the initial survey so we do not anticipate the need for a more detailed survey.

High anticipated acquisition cost of the property and the sources of the funding that would be used for acquisition

The principal federal funding source to acquire interest in this property would be from the Land and Water Conservation Fund, which is derived primarily from oil and gas leases on the outer continental shelf, motorboat fuel tax revenues, and sale of surplus federal property. Additional funds for acquisition may be secured through contributions from agency partners or non-profit organizations, grants, and other sources. Bernalillo County has pledged \$5 million to purchase an overlying conservation easement on the land which will reduce the cost of the purchase of the remaining fee value.

Is there really a need for the Refuge when there are existing facilities around Albuquerque that could be used for wildlife viewing and outdoor education

The closest site offering extensive environmental education in a relatively natural setting is the Rio Grande Nature Center 10 miles to the north. The Rio Grande Nature Center has communicated that they are often at their maximum supportable level of public visitation. Several nearby small farms are preserved by Bernalillo County as agricultural, historic, or cultural demonstration areas, or for growing crops in part to feed wildlife. These other facilities do not offer adequate public opportunity to connect people with the National Wildlife Refuge System.

What types of recreational uses are allowed on a new Refuge

The Service supports recreational uses when they are compatible with the purpose of a Refuge. Interim compatibility determinations will be made for activities related to 1) wildlife observation, 2) photography, 3) environmental education, and 4) interpretation. If the Refuge is formally established, full compatibility determinations will be made as part of later planning processes. Because of the urban location and relatively small size of the proposed Refuge, hunting will not be allowed. There are no fishable waters on the property.

Should the new Refuge be established as a Unit of Bosque del Apache National Wildlife Refuge

The project was originally proposed to be established as a satellite unit of Bosque del Apache National Wildlife Refuge 80 miles to the south in Socorro County. For two reasons we are now proposing it be a new stand-alone Refuge. The purposes of the urban Refuge would be markedly different from Bosque del Apache National Wildlife Refuge. Also, this would require significant alterations to the development of the Comprehensive Conservation Plan for Bosque del Apache, potentially delaying that plan beyond the Congressionally-mandated 2012 completion deadline.

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Division of Planning  
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