U.S. Fish and Wildlife Service

Bosque del Apache National Wildlife Refuge

Planning Update #1, Spring 2007

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Greetings from the Manager

Bosque del Apache National Wildlife Refuge (NWR) is beginning a multi-year process to develop a Comprehensive Conservation Plan (CCP) for the refuge. The CCP will guide the overall management of the refuge over the next 15 years. Your ideas and comments will play an important role in this process and I'd like to invite you to participate.

Your name has been placed on the Bosque del Apache planning mailing list due to your previous interest in refuge issues. If you would like your name removed from the list, please contact Regional Planner Carol Torrez at (505) 248-6821 or carol_torrez@fws.gov.

This packet will provide you with information about the refuge's history, current operations, and the planning process. You'll also learn about the U.S. Fish and Wildlife Service and the National Wildlife Refuge System and how the CCP process fits into the overall picture of refuge management.

Planning will officially begin with public scoping meetings in Socorro on May 8 and Albuquerque on May 10. Locations and times are listed on the back cover. We will refer to this planning update during our public scoping meetings and throughout the planning process. Please try to read this entire document before attending scoping meetings to help you understand the issues and make the meetings as productive as possible.

Please feel free to contact me or Regional Planner Carol Torrez if you have questions. Contact and public meeting information is on the back page. I look forward to meeting you at one or more of our public meetings.

Tom Melanson
Refuge Manager

What is a CCP?

Congress passed the National Wildlife Refuge System Improvement Act of 1997, which incorporated an underlying philosophy of "wildlife first" on all national wildlife refuges. The act provides guidance for managing refuges to ensure the long-term conservation of fish, wildlife, plants, and their habitats. Three important principles of the act are to maintain biological integrity, diversity, and environmental health of the refuge and facilitate compatible wildlife-dependent recreation.

The CCP:

- Ensures that management of the refuge reflects the purposes of the refuge and the mission, policies, and goals of the National Wildlife Refuge System.
- Provides the public with an understanding of the reasons for management actions on the refuge.
- Provides a vision statement for the refuge.
- Ensures the compatibility of current and future uses of the refuge with its purposes.
- Provides long-term continuity in refuge management.
- Provides budget justification for operation and maintenance and facility development requests.

The CCP will provide broad management direction and guidance for the refuge, contingent upon future funding and resources. The accompanying environmental document, required by the National Environmental Policy Act, will describe the alternatives considered and their environmental effects. You will have an opportunity to review and comment on the draft CCP and environmental document.

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What is the US Fish and Wildlife Service?

The U.S. Fish and Wildlife Service (FWS) is the principal Federal agency responsible for conserving, protecting, and enhancing fish, wildlife, and plants and their habitats for the continuing benefit of the American people. The FWS manages the nearly 94-million-acre National Wildlife Refuge System, which encompasses more than 540 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. The FWS also oversees the Federal Assistance program which distributes hundreds of millions of dollars in excise taxes on fishing and hunting equipment to state fish and wildlife agencies.

What is the National Wildlife Refuge System?

In 1903 President Theodore Roosevelt protected by presidential order an island with nesting pelicans, herons, ibis and roseate spoonbills in Florida's Indian River from feather collectors which were decimating their colonies. He established Pelican Island as the nation's first bird sanctuary and went on to establish many other sanctuaries for wildlife during his tenure. This small network of sanctuaries continued to expand, later becoming the National Wildlife Refuge System.

Today, Bosque del Apache NWR is one of more than 540 national wildlife refuges nationwide. The National Wildlife Refuge System is the largest system of lands in the world dedicated primarily for the conservation of wildlife. It is spread across 50 states and several U.S. territories. About 20.6 million acres in the Refuge System are managed as wilderness under the Wilderness Act of 1964.

In 1997 Congress passed the National Wildlife Refuge System Improvement Act; legislation which provides clear guidance for the management of the Refuge System. The act included a new statutory mission statement and directed the Service to manage the Refuge System as a national system of lands and waters devoted to conserving wildlife and maintaining biological integrity of ecosystems.

This law requires the FWS to develop a comprehensive conservation plan for each refuge. It also states that certain wildlife-dependent recreational activities (wildlife observation and photography, environmental education, interpretation, hunting and fishing) are priority public uses on refuges and strengthens the compatibility determination process for assuring that these and other activities do not conflict with refuge management purposes and goals.

Compatibility of Refuge Uses

Prior to allowing public or secondary uses on the refuge, federal law requires that the FWS first determine that these specific uses are compatible. A compatible use is a proposed or existing use of a refuge that, based on sound professional judgment of the refuge manager, will not materially interfere with or detract from the fulfillment of the National Wildlife Refuge System mission or the purposes of the refuge.
Compatibility determinations are used to help evaluate uses and will be integrated as part of the CCP planning process.

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 fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans.

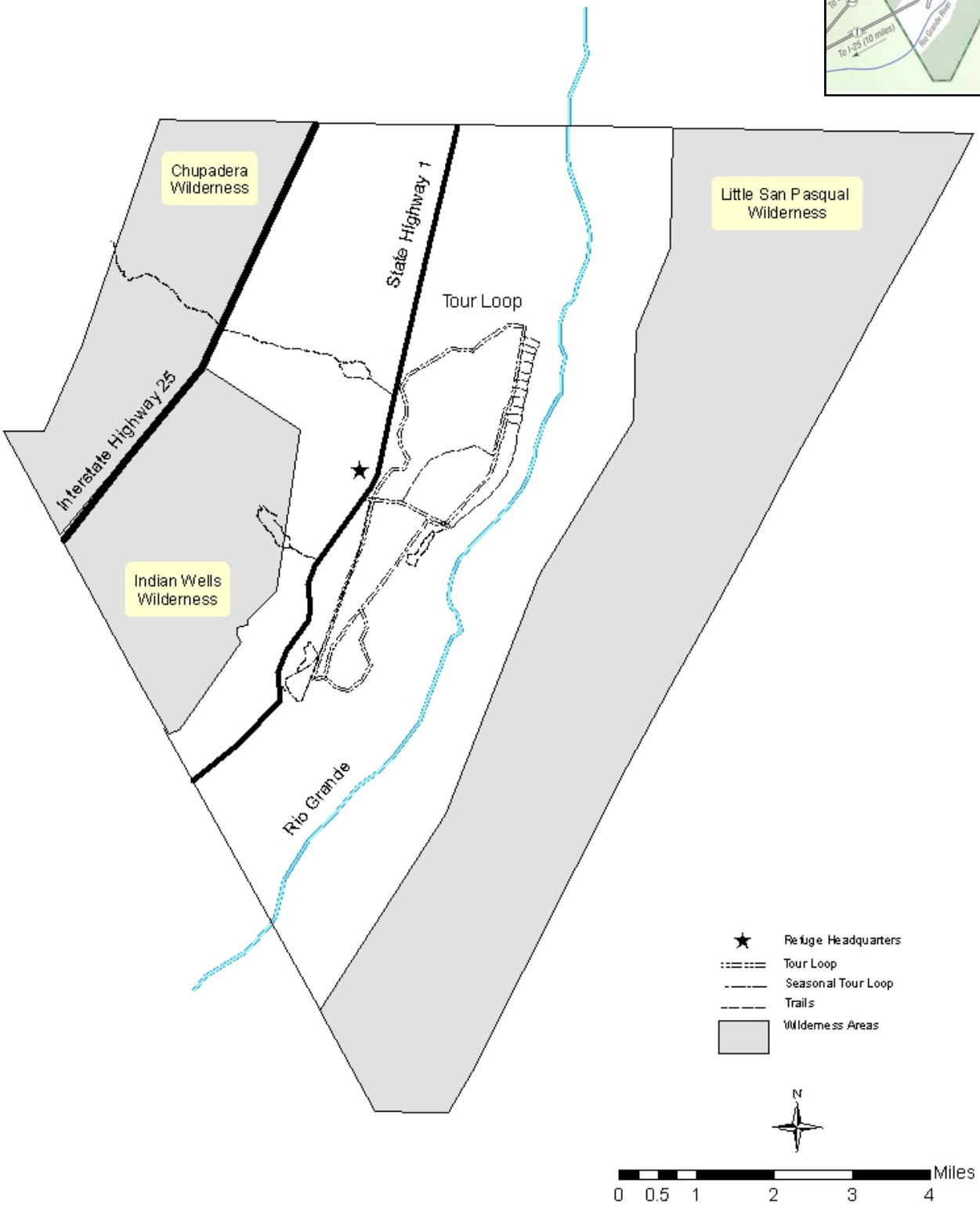
What is the mission of the Refuge System?

Refuges are places where wildlife comes first.

The FWS is a "primary use agency." This means that refuges are managed first and foremost for the benefit of fish, wildlife, plants, and their habitats. Our mission differs from other federal agencies, such as the US Forest Service, which focuses on forest stewardship and sustainable forest uses; the Bureau of Land Management, which deals with the productivity and multiple use of the land; and the National Park Service, which conserves scenery, wildlife, and historic objects for people's enjoyment.

Refuge Location

Bosque del Apache NWR consists of 57,191 acres in south-central New Mexico. It is bisected by approximately 10 river miles of the Rio Grande and is considered part of the Middle Rio Grande Valley, which stretches from Cochiti Dam to Elephant Butte. The refuge works with local, state, and federal agencies; landowners; and conservation organizations throughout the Upper Rio Grande watershed.



Refuge History

For almost 500,000 years, the Rio Grande has flowed past the volcanic bluffs and flanked the westerly Chupadera Mountain Range of the present day Bosque del Apache NWR. The wide, braided river meandered across the valley floor, creating a mosaic of wetlands, oxbow lakes, forests, and meadows. Typically, spring runoff flooded the river which scoured vegetation and accumulated litter and deposited soil nutrients and seeds from upstream. In some years, massive flooding changed the course of the river and the habitats along its banks. During early summer, river flows dropped. Late summer monsoons and winter storms maintained flows throughout the fall and winter.

The patchwork of habitats attracted a variety of wildlife – birds, mammals, reptiles, amphibians, fish and insects. In fall and winter, waterbirds – ducks, geese, and cranes -from northern climates migrated to the Middle Rio Grande Valley, which is also located along the Rocky Mountain Flyway.

Native Americans populated this area around 1300 A.D. As their nomadic lifestyles changed, they built more permanent dwellings. More than 600 years ago, Piro Indians came to the river valley for its rich, fertile soil with abundant plant and animal life.

Spanish explorers made their way north from Mexico in 1540, through Piro lands, establishing El Camino Real in 1598, which became a trade avenue for merchants between Mexico City and Santa Fe.

Raiding bands of Apaches camped under the protection of the cottonwoods along the river, hence the name “Bosque del Apache” (Spanish for "Woods of the Apache"). For three centuries after Europeans arrived, Native Americans contested or shared the land with traders and settlers; but drought, European diseases, and Apache raids forced the Piro to abandon their pueblos in the mid 1600s. During the pueblo revolt of 1680, the few remaining Piro retreated to El Paso with the Spanish. Their villages were destroyed and never rebuilt.

In 1845 the land which now comprises the refuge was awarded to Antonio Sandoval for his military services to Mexico. He used the land to graze sheep and cattle and to grow crops.

As human populations along the Rio Grande grew, the river changed. Irrigation Dams along the river were constructed and with a more reliable source of water, irrigation farming was broadened. Additional changes in the mid-20th century included construction of riverside drains and the Low Flow Conveyance Channel, river channelization, and saltcedar introduction in the Middle Rio Grande Valley. Cochiti Dam, north of Albuquerque, was completed in 1974. This flood control dam altered the timing of seasonal flooding of the floodplain below it and changed habitat quality along the river. The once free-flowing Rio Grande was becoming a narrow corridor surrounded by farms, towns, and homes rather than wetlands, forests, and meadows. Wildlife habitat was diminishing.

In 1936 the United States Government purchased the Bosque del Apache Land Grant for $125,311. The Bosque del Apache National Wildlife Refuge was established by Executive Order 82189 on November 22, 1939. Habitat improvement began with construction of water impoundments by the Civilian Conservation Corps (CCC). The CCC constructed refuge facilities, headquarters and water impoundments, many of which are still in use today.

USFWS

Draft Refuge Vision and Goals

The planning team has developed the following draft vision statement and goals for the refuge. We appreciate your comments and feedback on these items.

Gina Dello Russo/USFWS

Draft Vision Statement

Bosque del Apache National Wildlife Refuge is located along the Rio Grande of central New Mexico and includes approximately 10 miles of river adjacent to Chihuahuan desert uplands. The refuge supports a diverse and unique assemblage of wildlife habitats and resources including riparian forests, wetlands, cultivated lands, and upland grass and shrublands.

The refuge actively manages floodplain and upland areas by establishing and preserving desirable habitat for resident and migratory wildlife.

The refuge is a significant reference site for natural wildlife habitats. Additionally, the refuge serves as a research and demonstration area for innovative management techniques within the southwest arid region. It is the refuge's intent to continue managing and preserving these lands and resources, while encouraging education, providing high-quality public use opportunities, furthering research and building partnerships.

Draft Goals (not in priority order):

- Protect and enhance, through conservation, restoration and management, wildlife habitat for native species and natural diversity; including special status species (endangered, threatened or State species of concern), wintering and migratory waterbirds, shorebirds, neotropical migrants, and other resident wildlife.
- Protect and preserve cultural resources of historic and prehistoric significance
- Serve as stewards of designated Wilderness Areas and manage to preserve wilderness values.
- Provide, manage, and enhance safe high-quality opportunities for people to enjoy wildlife viewing, wildlife photography, fishing, hunting, environmental education, and interpretation and other activities that support wildlife-dependent recreation when compatible and consistent with Refuge purposes.
- Promote communication, collaboration, and partnerships among stakeholders, including local, state, and federal agencies; Tribal Governments; land managers; and conservation and education organizations to restore natural systems, native communities, and healthy environments throughout the ecosystem and to promote public appreciation and understanding.
- Serve as a demonstration area where innovative approaches to land management are developed, implemented and showcased. The refuge will develop new management techniques and transfer information through site visits, workshops, and reports and publications.

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Bosque del Apache NWR Programs Today

Habitat Management Programs

Bosque del Apache NWR's location along the Rio Grande and the Rocky Mountain Flyway makes it a destination for migrating waterbirds, neotropical migrants, shorebirds, and raptors.

Roughly 21% of refuge lands are within the active or historic floodplain of the Rio Grande. Most of the refuge's habitat management activities take place on this portion of the refuge and focus on restoring or mimicking river processes, removing and controlling invasive exotic plants, managing wetlands, or growing supplemental foods.

Habitats include native woodlands ("bosques"), floodplain meadows, historic and managed wetlands, and agricultural croplandss. Many of the existing habitats were restored from monotypic saltcedar stands over the past 20 years and this work continues today. Lands in the floodplain are actively managed. Invasive exotic plants are removed from floodplain forests and native plants replace them using a variety of techniques. Floodplain meadows have become rare in the Middle Rio Grande Valley. These areas of saltgrass and alkali sacaton are preserved and restored on the refuge wherever possible. Seasonal wetlands are managed by applying and removing water, disturbing the soil, and using prescribed fire, all to grow preferred plant species. During the fall and winter, migrating waterbirds depend on the resulting natural foods. Agricultural crops are grown to provide high carbohydrate foods, which are especially important during the coldest part of the winter. Wildlife using the floodplain include sandhill crane, many waterfowl species, migratory songbirds, raptors, and many mammal species.

The remaining 79% of refuge lands are Chihuahuan Desert uplands. The east and west sides of the Rio Grande have distinctly different plant communities, because of different soil types and elevations. Upland wildlife includes Gambel's quail, mule deer, white-winged and mourning dove, jackrabbits, and a variety of reptiles. Current upland habitat management includes using prescribed fire to reduce woody vegetation and promote grasslands.

Fire Management

Fire management activities on the refuge include unplanned wildfire suppression, prescribed fire, and fuels manipulation through non-fire means to support the refuge's resource management objectives.

Prescribed fire is used throughout the refuge to accomplish specific resource management objectives and to reduce hazardous fuels. Historically, flooding naturally disturbed habitats and controlled accumulated litter (thereby reducing fuels) in the Bosque and riverine habitats. With the construction of water control improvements upstream in the Rio Grande corridor, mechanical manipulations, herbicide applications and prescribed fire are now used to accomplish habitat management and fuels reductions.

Leroy Saavedra/USFWS

Various fire suppression strategies are used across the refuge, depending upon values at risk and resource sensitivity to suppression tactics. Minimum impact suppression techniques are used within the wilderness, upland Research Natural Areas, and in the actively managed portion of the refuge. A more aggressive suppression strategy is commonly selected around the perimeter of the refuge boundary (within the Wildland/Urban Interface) to protect private property and also to protect sensitive habitats within or adjacent to the refuge.

Mechanical fuels reduction activities are ongoing throughout the refuge. Activities include fuels reduction prior to prescribed burn implementation and fuel break construction to allow for effective fire protection in the event of an unplanned wildfire.

Visitor Services
In 1997, Congress passed the National Wildlife Refuge System Improvement Act which identified six wildlife-dependent activities as priority public uses on national wildlife refuges: wildlife observation, wildlife photography, environmental education, interpretation, hunting, and fishing. When compatible with the refuge purpose, these are considered "legitimate and appropriate uses of the System."

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Bosque del Apache NWR has one of the premiere visitor services programs in the southwest and is known nationally and internationally as a destination for birders and wildlife photographers. More than 2,000 students participate in a curriculum-based education program each year. More than 100 scouts participate in badge work and service projects. Refuge staff, volunteers, and Friends members offer a range of workshops, tours, programs, and special events each year. Hunting is allowed on portions of the refuge concurrent with State of New Mexico seasons and regulations. Fishing and frogging are also allowed on selected refuge waterways seasonally.

The Auto Tour Route is a 15-mile gravel road open daily from an hour before sunrise to an hour after sunset. Visitors enjoy seven observation platforms, several hiking trails, and an observation blind along the route. Two additional hiking trails are located west of NM Highway 1.

Volunteers
More than 100 volunteers contribute 25,000 hours to the refuge each year (equal to 12 full time employees). Volunteers provide support to all refuge programs. They answer phones, operate heavy equipment, lead school tours, staff the visitor center, enter biological data, conduct surveys, monitor animal populations, and maintain facilities. The refuge provides RV sites, hookups, and other amenities for resident volunteers.

Friends of the Bosque del Apache NWR
Friends of the Bosque del Apache NWR (the Friends) is a 501(c)3 non-profit organization that supports biological, education, and outreach programs at Bosque del Apache NWR. The Friends operate the Bosque Nature Store inside the Visitor Center and funds are used to support refuge projects. They produce site publications, newsletters, and a website that offer information about the refuge. The Friends have supported research on pintails, sandhill cranes, and other projects. They have been successful in securing funds to purchase a D-8 dozer for saltcedar removal and were able to secure private funding to construct the Christina Ann Lannan Educational Annex and expand the Visitor Center. They are currently raising funds to purchase 140 acres on Chupadera Peak, to provide recreational access.

The refuge works with the Friends of the Bosque del Apache NWR and the City of Socorro to organize the multi-day Festival of the Cranes each year. The event features more than 100 workshops, lectures, field trips and other activities on the refuge and throughout Socorro and Sierra counties and is attended by 8,000-10,000 people each year. The economic impact of the Festival extends through Thanksgiving week and is more than $2 million.

Wilderness
Bosque del Apache NWR totals 57,191 acres, of that more than 30,000 acres are in three designated wilderness areas. Wilderness areas on the refuge are upland habitats, including canyons, mountains, and grasslands. Two are located west of NM Highway 1: the Indian Well Wilderness (5,139 acres) and Chupadera Wilderness (5,289 acres) are each accessed by hiking trails. The Little San Pascual Wilderness (19,859 acres) is located on the east side of the refuge, from the pipeline road to the east boundary. All three wilderness areas are designated as a Class I Airshed under the Clean Air Act. Currently, hiking, hunting, and birding are allowed in all three refuge wilderness areas.

John Bertrand/USFWS

Issues

Habitat Management Issues

One major threat to riparian ecosystems is the rapid spread of saltcedar. This exotic species dominates wide areas throughout the Middle Rio Grande Valley as well as the refuge floodplain. Periodic catastrophic fires have reduced fire-intolerant native species, creating new voids which saltcedar rapidly fills. The negative aspects of saltcedar include not only its aggressive nature, but its propensity to use large quantities of water. Researchers have documented significant reductions in native birds, small mammals, reptiles and amphibians in floodplain forests dominated by saltcedar. Other non-native plants that invade refuge habitats include perennial pepperweed, Russian knapweed and Russian olive.

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Fire Management Issues

All fire management activities are implemented to support refuge management objectives. One potential issue which may arise from fire management activities is the short-term effects from smoke related to prescribed burning. Visibility and air quality are the greatest of issues. Potential long-term issues could arise in the event of an escaped prescribed fire and are similar to the impacts which would arise from a wildfire burning in the same area.

Visitor Services Issues

Currently, many refuge visitor facilities, programs, and products are deteriorating, not universally accessible, and/or outdated. There is increasing demand for facilities and services which need to be addressed and prioritized. An overall plan is needed to guide facility and program development so that resources are targeted to themes that support and reinforce refuge management priorities. In addition, non wildlife-dependent recreation uses to be clearly addressed.

USFWS

Water Issues

Water quality and quantity issues are common in the Middle Rio Grande Valley. Bosque del Apache NWR has a senior water right in the Valley; however, the refuge is geographically located at the end of the irrigation system. In drought years, there is the threat of lack of surface water to support natural processes to the active floodplain or irrigation to managed areas. Efforts to reduce water loss, such as concrete lined ditches and different irrigation techniques, will become higher priority projects in the future.

Help us plan the future

We are now beginning the scoping process for the CCP and will hold two public meetings in the evening to help identify issues and gather information.

For your convenience we've selected a location in Socorro and one in Albuquerque, to reach a wide audience of stakeholders. Scoping meetings will begin at 7:00 p.m. and end at 9:00 p.m.

Socorro Public Scoping Meeting

Tuesday, May 8, 2007
Socorro County Annex Building
(Old BLM Building)
198 Neel Avenue
Socorro, NM 87801

Albuquerque Public Scoping Meeting

Thursday, May 10, 2007
The Indian Pueblo Cultural Center
2401 12th Street NW (1 block North of I-40)
Albuquerque, NM 87104
Use the Northeast Entrance

Contact Information

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In addition to attending public meetings, you are invited so submit your comments and concerns by mail, e-mail, fax, or by stopping in to see us.

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Address correction requested