

U.S. Fish & Wildlife Service

# Bosque del Apache

*National Wildlife  
Refuge*



*“I saw them first many  
Novembers ago and  
heard their triumphant  
trumpet calls, a hundred  
or more sandhill cranes  
riding south on a  
thermal above the  
Rio Grande Valley, and  
that day their effortless  
flight and their brassy  
music got into my soul.”*

*Charles Kuralt*





## Introduction

Bosque del Apache means “woods of the Apache,” named for the Apaches that routinely camped in the riverside forest. Today, Bosque del Apache is known as one of the most spectacular refuges in North America. Each autumn, tens of thousands of birds—including sandhill cranes, Arctic geese and ducks—make the refuge their winter home. The air is filled with the honking of geese and the guttural call of cranes. Flocks of snow geese lift off from their feeding grounds when frightened by a stalking coyote or eagle. At dusk, flights of geese and cranes return to roost in the marshes or on the Rio Grande. In the summer, Bosque del Apache, though quiet, remains an oasis in the surrounding arid lands.

Bosque del Apache National Wildlife Refuge was established in 1939 to provide “a refuge and breeding grounds for migratory birds and other wildlife” and to develop wintering grounds for greater sandhill cranes, which were then endangered.

Our present goals are to:

Provide habitat and protection for endangered species.

Provide habitat and protection for migratory birds during the winter with special emphasis on sandhill cranes, snow geese, dabbling ducks, and Canada geese.

Provide habitat and protection for resident animals.

Provide the general public with an opportunity to see and understand wildlife and provide visitors with a high quality wildlife and educational experience.

*Left: Photo by  
A. Morris*

*Previous page:  
Photo by Paul A.  
and Shirley  
Berquist*

Located on the northern edge of the Chihuahuan desert, the refuge straddles the Rio Grande approximately twenty miles south of Socorro, New Mexico. The heart of the refuge is 7,000 acres of flood-plain where the waters of the Rio Grande have been diverted to create extensive wetlands and farmlands. The rest of the refuge is made up of arid foothills and mesas, which rise to the Chupadera Mountains to the west and to the San Pascual Mountains to the east. Most of these arid lands are preserved in three wilderness areas.

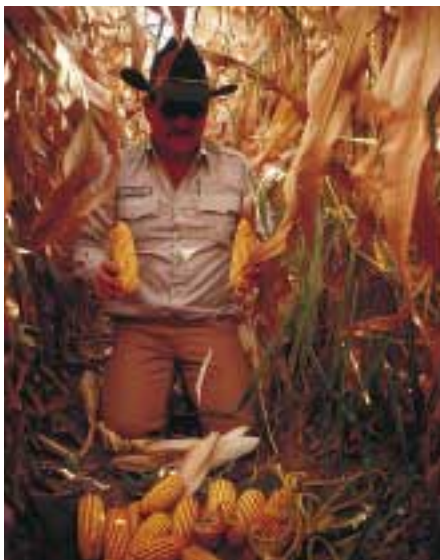
### **Managing for Wildlife**

To provide food, water, shelter, and space for wildlife, several management techniques are used at Bosque del Apache National Wildlife Refuge.

### *Farming*

Local farmers grow crops on the refuge for wintering waterfowl and cranes. Farmers plant alfalfa and corn, harvesting the alfalfa and leaving the corn for wildlife. The refuge staff also grows corn, winter wheat, clover, and native plants as additional food.

*FWS photo*



*Photo by Virginia Heitman*

### *Moist Soil Management*

Many of the water management activities on the refuge imitate the ebb and flow of the Rio Grande before channelization and dams. The ancient river, influenced by snowfall in the Rocky Mountains and summer monsoons, periodically flooded and replenished natural marshlands that occurred along the river. Today, many of those marshes have been lost and the river no longer meanders.

Water levels in marshes are manipulated in order to create moist fields that promote growth of native marsh plants. Marsh management is rotated so that varied habitats are always available. Dry impoundments are disced or burned, then reflooded, to allow natural marsh plants to grow. When mature marsh conditions are reached, the cycle is repeated. Many kinds of wildlife food are grown this way including smartweed, millet, chufa, bulrush, and sedges.



*Removing Salt Cedar; FWS photo*

### *Cottonwood Rehabilitation*

Many cottonwood and willow bosques that once lined the Rio Grande have been lost to human development. Salt cedar, or “tamarisk,” originally introduced as an ornamental plant and for erosion control, has taken over vast areas of the refuge. In order to restore native bosques that have higher value for wildlife, salt cedar is being cleared and many areas are being planted with cottonwood, black willow, shrubs, and other understory plants.

### **Watching Wildlife**

Each season at Bosque del Apache NWR offers unique wildlife viewing opportunities. Peak visitation occurs in winter, when cranes, bald eagles, and snow geese are present. During the spring and fall, visitors can see migrant warblers, flycatchers, and shorebirds. The summer months are a good time to see nesting songbirds, waders, shorebirds, and ducks.

Some year-round residents include mule deer, coyote, porcupine, muskrat, turkey, quail, pheasant, and roadrunner.

### **Cultural History**

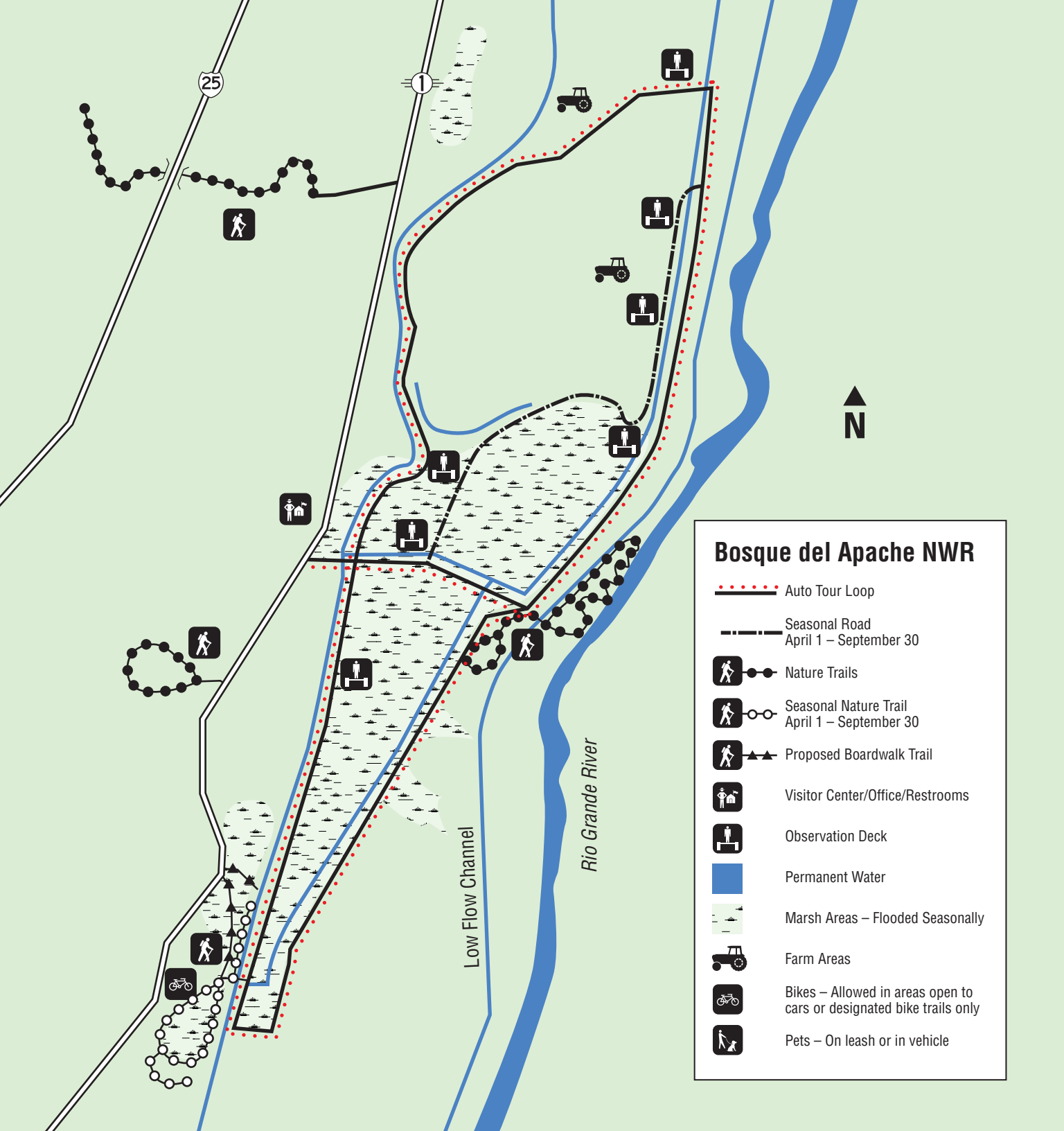
Bosque del Apache has been inhabited for centuries. Over 700 years ago, Piro Indians came to the valley for its fertile soil with abundant plant and animal life. These pueblo dwellers farmed, raised turkeys, gathered wild fruit, and hunted wildlife. They left evidence in their rock art of the animals with whom they shared this land. European diseases and Apache raids forced the Piro to abandon their pueblos in the 1600s. During the Pueblo Revolt of 1680, the few remaining Piro fled to El Paso with the Spanish. The Piro never returned to their native land, and their villages fell into ruin.















Late in the 16th century, Spanish explorers and colonists, on their way north from Mexico, established “El Camino Real,” or “The Royal Road.” This road served as a vital trade avenue between Mexico and Santa Fe for almost 300 years. Remnants of the Camino Real and the Piro occupation are protected within the Bosque del Apache National Wildlife Refuge.



*Artwork by  
Jan Gunlock*



## Bosque del Apache NWR

-  Auto Tour Loop
-  Seasonal Road  
April 1 – September 30
-  Nature Trails
-  Seasonal Nature Trail  
April 1 – September 30
-  Proposed Boardwalk Trail
-  Visitor Center/Office/Restrooms
-  Observation Deck
-  Permanent Water
-  Marsh Areas – Flooded Seasonally
-  Farm Areas
-  Bikes – Allowed in areas open to cars or designated bike trails only
-  Pets – On leash or in vehicle



*Coyote, photo by Paul A. and Shirley Berquist*

### **Visitor Center**

For your orientation to the refuge, we suggest stopping at the Visitor Center. Here you will find current information on wildlife sightings, exhibits, videos, and a bookstore. Hours are Monday through Friday 7:30 am to 4:00 pm and weekends from 8:00 am to 4:30 pm year round, except for occasional holidays.

### **Tour Route**

The 15-mile auto tour loop allows visitors to enjoy wildlife viewing and photography. Information is available year-round at the tour entrance. Wildlife is accustomed to visitors and may be closely observed from vehicles, which serve as photo blinds. The refuge tour route is open from one hour before sunrise to one hour after sunset every day of the year. There is a fee for the self-guided auto tour; federal entrance passes are accepted. The Seasonal Tour Road is open spring through summer, and is an excellent place to observe shorebirds and waders. Vehicles must remain on established roads that are open to the public and out of closed areas. The refuge tries to have as many areas open to the public as possible.

### **Picnic Area**

A picnic shelter and picnic tables are located near the visitor center parking lot. Visitors are welcome to picnic at their vehicles along the tour route. Please pick up and pack out all litter.

### **Nature Trails**

Several trails are open for wildlife observation in a variety of settings, ranging from a desert canyon to a trail by the Rio Grande.

### **Wilderness Areas**

Bosque del Apache NWR has approximately 30,000 acres of wilderness. The Chupadera, Indian Well, and Little San Pascual wilderness areas are made up of Chihuahuan desert habitat with no available water. Hiking and nature observation can be enjoyed; please stop by the visitor center for more information.

*Canyon Trail, FWS photo*





## Viewing Tips

Dawn and dusk are the best times to see wildlife.

In warmer climates, little is moving on hot summer afternoons or on windy days.

Observe from the sidelines. Leave “abandoned” young animals alone. A parent is probably close by waiting for you to leave. Don’t offer snacks; your lunch could disrupt wild digestive systems.

Cars make good observation blinds. Drive slowly, stopping to scan places wildlife might hide. Use binoculars or a long lens for a closer look.

Try sitting quietly in one good location. Let wildlife get used to your presence. Many animals that have hidden will reappear once they think you are gone. Walk quietly in designated areas, being aware of sounds and smells. Often you will hear more than you will see.

Teach children quiet observation. Other wildlife watchers will appreciate your consideration.

Look for animal signs. Tracks, scat, feathers, and nests left behind often tell interesting stories.

*Porcupine, FWS Photo*



*Left: Chupadera  
Wilderness,  
FWS Photo*



## Birds Commonly Seen Year-round



Great Blue Heron  
*Ardea herodias*



Red-winged Blackbird  
*Agelaius phoeniceus*



American Coot  
*Fulica americana*



Northern Shoveler  
*Anas clypeata*



Red-tailed Hawk  
*Buteo jamaicensis*



Neotropic Cormorant  
*Phalacrocorax  
brasilianus*



American Kestrel  
*Falco sparverius*



Mallard  
*Anas platyrhynchos*



Gambel's Quail  
*Callipepla gambelli*



Northern Pintail  
*Anas acuta*

## Birds Commonly Seen in Winter



Sandhill Crane  
*Grus canadensis*



Northern Harrier  
*Circus cyaneus*



Bald Eagle  
*Haliaeetus leucocephalus*



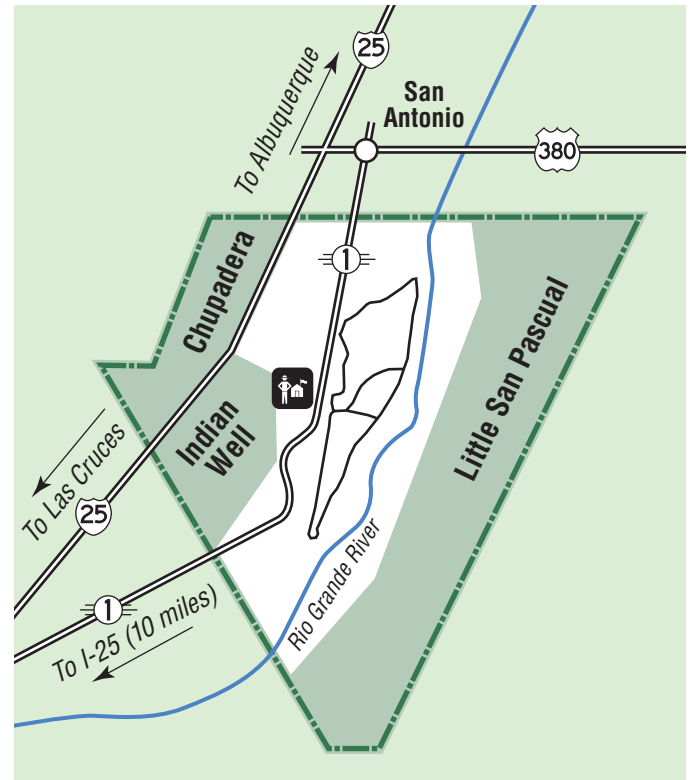
White-crowned Sparrow  
*Zonotrichia leucophrys*



Snow Goose  
*Chen caerulescens*

## Directions to Bosque del Apache NWR

Situated just off Interstate 25 midway between Albuquerque and Las Cruces. Socorro is the nearest city. To reach the refuge from Socorro, drive eight miles south on I-25 to exit 139, continue east one-fourth mile on US 380 to the flashing signal at San Antonio, turn right onto Old Highway 1, continue south nine miles to the Visitor Center. From Las Cruces, drive north on I-25 to exit 124 (San Marcial), then north on Old Highway 1 to Visitor Center.



*Bird photo credits: Great Blue Heron, Red-tailed Hawk, and Bald Eagle by George Jameson; American Coot by Virginia Heitman; Red-winged Blackbird and Mallard by Skip Heitman; Neotropical Cormorant, Sandhill Crane, White-crowned Sparrow by A. Morris; Northern Harrier by Larry R. Ditto; Snow Goose by Paul A. and Shirley Berquist.*

**Bosque del Apache  
National Wildlife Refuge  
P.O. Box 1246  
Socorro, New Mexico 87801  
505/835-1828  
505/835-0314 Fax  
<http://southwest.fws.gov>**

**U.S. Fish & Wildlife Service  
1 800/344 WILD**

**February 1999**



*USFWS photo by  
Phil Norton*