

## Part Two

# Rio Bosque Wetlands Park

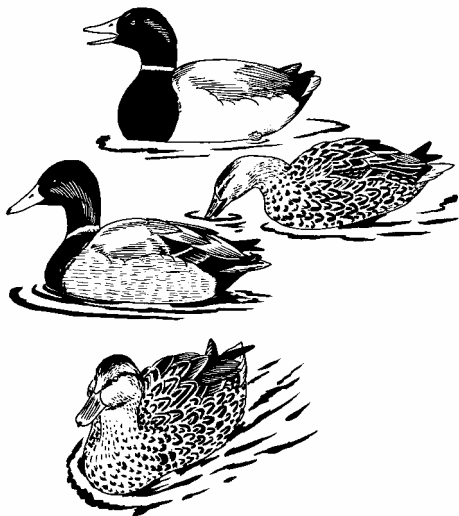
### Park History

Rio Bosque Wetlands Park is 372 acres in size located in southeast El Paso County. It lies within the corporate limits of the city of El Paso; northeast and southeast of the park is the city of Socorro, Texas; immediately southwest of the park is the Rio Grande, which forms the international border between the U.S. and Mexico. The majority of the site carries the legal designation of U.S. Parcel No. 18, as it was created in 1936 by a formal transfer of land from Mexico to the U.S. as part of the Rio Grande Rectification Project.

For 37 years, U.S. Parcel No.18 was controlled by the IBWC; during a brief period from 1969 to 1973, the parcel was leased to adjoining property owners for agricultural purposes. In 1973, the IBWC declared U.S. Parcel No. 18 as excess and transferred control to the General Services Administration, which in turn transferred it to the Bureau of Outdoor Recreation. In December 1973, ownership of the parcel was transferred to the city of El Paso with the stipulation that the property be used for the development of a park. The city subsequently acquired the surrounding parcels. Today, the area designated as Rio Bosque Wetlands Park is enclosed by irrigation canals and drains on three sides and by the Rio Grande levee on its remaining boundary. The city has had the long-standing goal of developing

the park site; over the years the concept of the park's development has changed from one of an active recreation site to a natural area and wildlife refuge. Unfortunately, at no time has the city been able to commit sufficient financial resources to undertake the park's development.

In 1995, an opportunity to develop Rio Bosque Wetlands Park emerged out of the coalescing interests of a number of entities. Upstream of the park, the U.S. Section of the International Boundary and Water Commission (IBWC) was undertaking the construction of the American Canal Extension, a facility that serves as the principal conduit of irrigation waters through the city of El Paso to serve the downstream agricultural interests. Studies indicated that the construction of the canal would disrupt wetland areas and therefore mitigation measures were required. As a means of fulfilling this requirement, the IBWC approached the city of El Paso and offered to assist the city in developing



Mallard  
*Anas platyrhynchos*

Rio Bosque as a wetlands park. Ducks Unlimited, a private, non-profit organization, underwrote the cost of the project design and also provided water control structures. The design called for rebuilding the historic river meander through the park to serve as a water-delivery channel and excavating three wetland cells, totaling 183 acres, capable of being flooded by diverting water from the channel.

El Paso Water Utilities, which operates the Roberto Bustamante Wastewater Treatment Plant (WWTP) immediately northwest of the park, and EPCWID agreed to make treated effluent available to the park during the non-irrigation season. The University of Texas at El Paso (UTEP) volunteered to assume management responsibility for the park and was granted a license agreement for that purpose by the city in November 1996. The IBWC completed construction of the initial site improvements in 1997.

The goal of park management is the restoration and enhancement of valuable wetland and riparian habitat along the Rio Grande while providing public open space and educational opportunities.

## **Water Resources**

The amount, timing and quality of water available will constrain the extent of wetland habitat practically achievable within Rio Bosque Wetlands Park. If wetland species are to be sustained, relatively constant environmental conditions must be created. Water flows may vary, and probably should be varied to mimic the natural ebb and flow of the river. Care must be exercised in the application of water with high levels of dissolved minerals, as soil conditions must not be allowed to become increasingly saline over time or this could impede the establishment of desired riparian species. Consequently, sufficient water must be applied to carry soluble minerals away and thereby maintain a 'salt balance.'

**Treated Wastewater:** The primary water supply to the park is treated wastewater from the adjoining Bustamante WWTP. This plant has a design capacity of 39 million gallons per day (gpd). Inflow exhibits a slight seasonal variation. During 2001, inflow was approximately 30 mgd in the summer months and 27 million gpd in the winter. In the future, as the volume of influent approaches the plant's capacity, the facility will be expanded. Although the volume of wastewater generated would seem to provide ample water for the park, other entities compete for the same water.

The plant has two permitted discharges: Riverside Canal and Riverside Drain. Treated wastewater discharged into Riverside Canal supplements diverted river water and is used by agricultural irrigators

downstream. Only when treated wastewater is discharged into the Riverside Drain can it be diverted into Rio Bosque Wetlands Park. Because both the canal and drain are controlled by EPCWID, it is the irrigation district, rather than the utility, that determines the availability of treated wastewater to the park. Consequently, water is reliably available only after the irrigation season is complete. Despite this limitation, water in the fall and winter allows the park's wetland ponds to be filled, which support a variety of migrating waterfowl.

Through the cooperation of EPCWID, the park received an average of seven million gpd to Rio Bosque Wetlands Park during the spring and summer months of 2001. The availability of water during the growing season dramatically accelerated the growth and spread of native riparian species. In 2002, EPCWID is again making water available to the park. Unfortunately, the park is less likely to receive water during the 2003 irrigation season, as the broader region is experiencing drought and surface water allocations in the El Paso region are expected to be dramatically reduced.

In addition to agricultural interests, other entities will compete for the Bustamante WWTP's effluent in the future. Currently, the utility has a reclaimed water system in place that is capable of supplying two million gpd of treated wastewater to a nearby industrial park for non-potable uses; as of 2001, the actual usage of this reclaimed water was only 700,000 gpd, but it is expected to increase over time. El Paso Water Utilities is also planning a major investment for a reclaimed water system (the so-called "purple pipe" system) to provide treated wastewater to area parks and school playgrounds. When fully implemented, as much as 7 million gpd will be needed for this purpose.

Staff from UTEP/CERM are actively discussing options with El Paso Water Utilities and EPCWID for providing sufficient treated wastewater during the spring and summer to keep the park's main channel wet year-round, thereby expanding the riparian habitat and, possibly, enabling a small perennial deepwater pond to be established.

Table One  
**Bustamante WWTP Effluent Quality**

	<u>2000</u>	<u>2001</u>
CBOD5 *	4 mg/L	3 mg/L
TSS	5	2
TDS	1,048	1,051
NH <sub>4</sub> -N (Apr-Oct)	1.97	2.34
NH <sub>4</sub> -N (Nov-Mar)	4.33	3.32
Cl (residual)	1.99	1.95
Dissolved O <sub>2</sub>	6.53	6.25
pH	7.1	7.2
Flow (mgd)	27.11	27.35

\* CBOD5 refers to Carbonaceous Biological Oxygen Demand, based on a 5-day test.

Source: El Paso Water Utilities

**Surface Water Quality:** Treated wastewater from the Bustamante WWTP is mildly brackish and has a higher nutrient level than river water. Table 1 provides data on the water chemistry of the plant's effluent. Water chemistry tests have also been performed for samples collected from one of the ponds within the park and from four locations along the channel within the park. Results of this testing for alkalinity, chloride, dissolved oxygen, pH, nitrates, silica, phosphates, carbon dioxide, sulfide, and conductivity can be found in Appendix D.

**Ground Water:** As discussed in a preceding section, the alluvium aquifer of the Rio Grande underlies Rio Bosque Wetlands Park. Under Texas law, property owners have the ‘right of capture’ for ground water. UTEP/CERM, working with the city of El Paso, could drill one or more wells to tap into the Rio Grande aquifer as a supplemental source of water for the park. So doing would entail capital costs to drill and equip the wells, and operational costs for pumping and equipment maintenance.

Unfortunately, the Rio Grande alluvium aquifer is of poor quality. In July 2000, 13 shallow wells were installed at the park to permit monitoring of ground water depth and quality. The wells were logged under the direction of Dr. Richard Langford of UTEP’s Geological Sciences Department. A map of monitoring well locations and well logs appear in Appendix A; water quality data obtained thus far are found in Appendix C. The data show considerable variation in this shallow ground water with total dissolved solids (TDS) ranging from 660 to nearly 3,800 ppm. Deeper strata should contain better quality ground water, but it is still expected to be mildly brackish. Irrigating with brackish water will require careful management so as not to cause the salination of soils.



Auger boring for a Monitoring Well

In the spring of 2001, a team of UTEP civil engineering students, working under the direction of Dr. Charles Turner, prepared a feasibility study for constructing a one-half acre pond at the park. The students took a novel approach that involved a chemical seal to impede seepage loss, a well served by a pump sized to provide sufficient flow to offset evaporation loss and thereby maintain a constant water level, and the use of a photovoltaic system to provide power to the pump.

A test well, drilled to a depth of 140 feet, is planned for the fall of 2002. This will be the first effort at accessing the park’s ground water as a supplemental water source. Provided the water is not overly brackish, one or more permanent wells may be developed to ensure a water supply for the park during the summer growing season.

**Alternative Source of Water:** Few other sources of water are available to the park. Direct precipitation is meager, and stormwater runoff from outside the park boundaries is not an option, as the park is isolated from all adjoining parcels by the Riverside Canal (on the northeast and southeast), the Riverside Drain (on the southwest), and the remnant of the Rio Intercepting Drain (on the northwest).

## Soil Characteristics

Because the park lies within the floodplain of the river, there are many different types of depositional soils in the park ranging from sandy loams to silty clays (see Appendix B2). Salt cedar appears to be closely associated with the “Mg – man-made Gila material” soil type. This soil type is especially prominent in the area where the former river channel was filled during the 1930s era Rio Grande Rectification Project.

The different soil types within the park have varying permeability. Unfortunately, the initial pond design did not well-account for the varying soil types, and ponds are positioned over soils of varying permeability. If the ponding areas are modified in the future, soil type must be taken into consideration. Generally, ponds should be positioned in areas with low permeability soil, as soils higher in clay content will better hold water. Clay content should not be too high, however, as a through-flow of water will be required to maintain equilibrium conditions regarding soil salt content.

In February 1997, Dr. Jan Hendrickx from New Mexico Tech conducted a soil salinity study at the park at the request of the Bureau of Reclamation (Hendrickx et al. 1998). This study found large areas with soil salinity less than 40 milliSiemens per meter (mS/m) and salinities greater than 100mS/m are rare (Appendix B1). This is important because many native riparian species like cottonwood require salinity of less than 50 mS/m for survival. Salinity appears to increase with depth, with a mean salinity of 24 mS/m at 0.75 meters (2.5 feet) and 49 mS/m at 6 meters (20 feet). There is a strong correlation between soil salinity and the interaction of soil type and ground water depth. Some 30 to 39% of the variability in salinity measurements appears to be attributable to the soil type and ground water interactions.

## Ecosystems

**Aquatic ecology:** In summer 2001, a baseline aquatic survey was conducted by UTEP students under the direction of Dr. Elizabeth Walsh. Samples were collected at five sites within the park on seven different occasions between May 15<sup>th</sup> and August 23<sup>rd</sup>, (approximately 14-day intervals). Sampling sites included the channel inlet and outlet and two mid-channel sites, on opposite sides of Gate 4 (see the map in Appendix A1). The fifth site was Wetland Cell 2. Among the organisms identified were various protists including ciliates (*Vorticella*, *Paramecium* and other slipper-shaped organisms, *Didinium nasutum*, Lacrymaridae, Ophryoglena, Strobidiidae, Philasteridae), flagellates (*Sphaeroeca volvox*, *Histomonas*), and amoeba (Thecamoebidae). Two



algal species were identified: *Hydrodictyon reticulatum* and *moegeotia scalaris*. A number of invertebrates were identified including coelenterates, rotifers, bdelloids, cladocerans, gastrotrichs, flatworms, nematodes, oligochaetes, gastropods, ostracods, copepods, collembola, and insects (adults and larvae). Fish and toads (adults and larvae) were the only vertebrates identified and duckweed (*Lemna*) and cattails (*Typha* sp.) were the only plants identified.

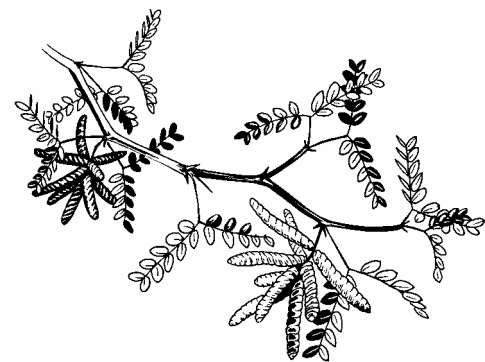
**Terrestrial Vegetation:** Appendix E1 provides a partial list of plant species currently found in the park. Nomenclature follows Worthington (1989, 1997). Current vegetation patterns in the park have been greatly influenced by past disturbance, including the channelization of the Rio Grande in the 1930s, past farming of park lands, vehicular traffic over much of the park, and, most recently, the construction of the wetland cells and water-delivery system. Currently, the vegetation in over approximately 65% of the park is in early successional stages.

The construction work in 1997 significantly altered the park landscape. While care was exercised to avoid disturbing desired native vegetation, much existing vegetation, including several extensive saltcedar (*Tamarix ramosissima*) stands, was cleared during the course of creating the wetland cells and water-delivery system. The areas now in early successional stages are dominated by species such as Russian thistle (*Salsola australis*), seepweed (*Suaeda* sp.), alkali heliotrope (*Heliotropium curassavicum*), jackass clover (*Wislizenia refracta*), bitterweed (*Hymenoxys odorata*), tansy mustard (*Descurainia pinnata*), mountain pepperweed (*Lepidium montanum*) and Indian rushpea (*Hoffmanseggia glauca*). Some areas remain largely barren, with a hardpan soil surface.

Approximately 15% of the park supports shrublands dominated by fourwing saltbush (*Atriplex canescens*), honey mesquite (*Prosopis glandulosa* var. *torreyana*) and jimmyweed (*Isocoma pluriflora*). These areas were left largely undisturbed during the 1997 construction work.

Another 15% of the park supports woodlands, with tornillo (*Prosopis pubescens*) and saltcedar the dominant species.

Prior to construction of the wetland cells, dense monotypic stands of saltcedar covered approximately 25% of the park. Much saltcedar was removed in the course of construction. Although several dense stands remain, much of what is now present is interspersed with tornillo. The clearing done in 1997 was not complete, however, and in many of the cleared areas, saltcedar has resprouted from incompletely removed root systems. Preventing the reestablishment of saltcedar requires manual removal or treatment with herbicide.



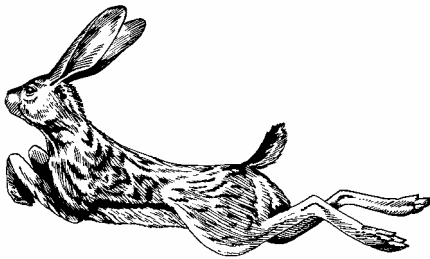
Tornillo  
*Prosopis pubescens*

Approximately 5% of the park supports riparian scrub associations dominated by wolfberry (*Lycium berlandieri*), arrowweed (*Pluchea sericea*), spiny aster (*Chloracantha spinosa* var. *spinosa*) and coyote willow (*Salix exigua*). These associations are best represented near the park perimeter, in areas influenced by the Riverside Canal and the irrigation drains bordering the park.

The best-developed sand dunes in the park are in a small area along the historic river channel. This site, in the southeast part of the park, is the only area where broom psorothamnus (*Psorothamnus scoparius*), a shrub that favors deep, well-drained sands, grows in the park.

At one time, the city of El Paso maintained a small area in the interior of the park as a tree farm where it grew trees and shrubs for landscaping city parks and other properties. The remnant rows of trees and shrubs still present in this area are an eclectic mix of native and exotic species very different from the rest of the park.

Grasslands are essentially nonexistent in the park. A few scattered individuals of species such as plains bristlegrass (*Setaria leucopila*) and alkali sacaton (*Sporobolus airoides*) are present in upland areas, and species such as barnyardgrass (*Echinochloa crusgalli*), hare barley (*Hordeum murinum* ssp. *glaucum*) and rabbitfoot grass (*Polypogon monspeliensis*) are beginning to invade along the re-built river channel. The park's large population of black-tailed jackrabbits (*Lepus californicus*) appears to play an important role in the current scarcity of grasses.



Black-tailed Jackrabbit  
*Lepus californicus*

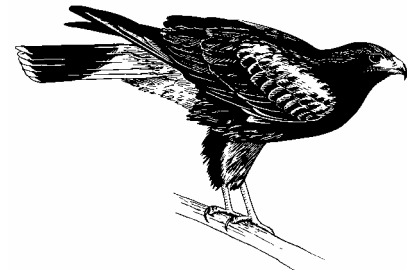
Prior to 2001, the park received water only in fall and winter. There was no opportunity for native wetland or riparian-forest habitat to become established beyond the plantings described in the following “Restoration Projects to Date” section. Through the cooperation of EPCWID and El Paso Water Utilities, the park received water during the spring and summer of both 2001 and 2002. As a result, wetland and riparian plant communities are now beginning to develop along the water-delivery channels and in the wetland cells.

**Birds:** Rio Bosque has long provided important habitat for birds, 191 species of which have been recorded to date (Appendix E2). Common nesting species include Harris’s Hawk (*Parabuteo unicinctus*), Swainson’s Hawk (*Buteo swainsoni*), Gambel’s Quail (*Callipepla gambelii*), Mourning Dove (*Zenaida macroura*), Greater Roadrunner (*Geococcyx californianus*), Burrowing Owl (*Speotyto cunicularia*), Black-chinned Hummingbird (*Archilochus alexandri*), Western Kingbird (*Tyrannus verticalis*), Verdin (*Auriparus flaviceps*), Northern Mockingbird (*Mimus*

*polyglottos*), Crissal Thrasher (*Toxostoma crissale*), Yellow-breasted Chat (*Icteria virens*), Cassin's Sparrow (*Aimophila cassinii*), Blue Grosbeak (*Guiraca caerulea*), Painted Bunting (*Passerina ciris*) and House Finch (*Carpodacus mexicanus*).

During the 1990s, a large colony of Snowy Egrets (*Egretta thula*), Cattle Egrets (*Bubulcus ibis*) and Black-crowned Night-Herons (*Nycticorax nycticorax*) nested in a saltcedar stand at the park, though they have not nested there since 1999. Over 100 nests were present in 1999, including the first documented Great Egret (*Ardea alba*) nest in El Paso County.

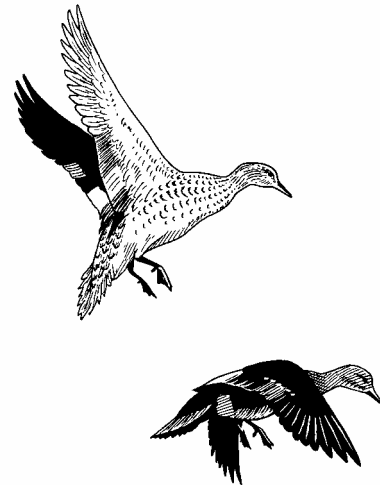
A wide variety of raptors use the park. The peak season is winter, when, in addition to the resident Harris's Hawks, wintering Northern Harriers (*Circus cyaneus*), Sharp-shinned Hawks (*Accipiter striatus*), Cooper's Hawks (*Accipiter cooperii*), Red-tailed Hawks (*Buteo jamaicensis*), Ferruginous Hawks (*Buteo regalis*) and Peregrine Falcons (*Falco peregrinus*) all may be present. In both 2000-2001 and 2001-2002, a Bald Eagle (*Haliaeetus leucocephalus*) over-wintered at the park. Also of note in winter are large numbers of American Crows (*Corvus brachyrhynchos*) and Chihuahuan Ravens (*Corvus cryptoleucus*) that roost in the park's woodlands.



Harris's Hawk  
*Parabuteo unicinctus*

Summer-resident birds include a number of nearctic-neotropical migrants, such as Yellow-breasted Chat, Blue Grosbeak and Painted Bunting, that are restricted in the El Paso region to riparian habitats. The Yellow-billed Cuckoo (*Coccyzus americanus*), a rare and declining species throughout the western United States, formerly nested in saltcedar woodlands at the park, but cuckoos have not been observed since much of the saltcedar was removed in the course of constructing the wetland cells.

The new element brought by the wetland project that has greatly increased the park's avian diversity is water. Thousands of ducks and other water-associated birds now use Rio Bosque when the wetlands are flooded. The ducks attracted to these shallow-water areas are mainly dabbling ducks, including Gadwall (*Anas strepera*), American Wigeon (*Anas americana*), Mallard (*Anas platyrhynchos*), Cinnamon Teal (*Anas cyanoptera*), Northern Shoveler (*Anas chrypeata*), Northern Pintail (*Anas acuta*) and Green-winged Teal (*Anas crecca*). Great Blue Heron (*Ardea herodias*), Great Egret, Snowy Egret and Greater Yellowlegs (*Tringa melanoleuca*) are other regular users of the wetlands in winter. In 2001, with water present all spring and summer, both Mallard and Cinnamon Teal nested at the park.

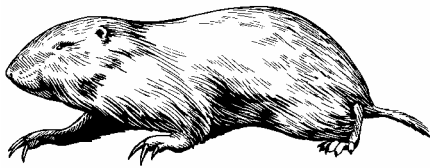


Gadwall  
*Anas strepera*



Some 20 shorebird species have been recorded at the park, most using the area as migratory stopover habitat. During each of the past 3 years, 20-30 pairs each of Black-necked Stilts (*Himantopus mexicanus*) and American Avocets (*Recurvirostra americana*) have nested in the park's wetland cells.

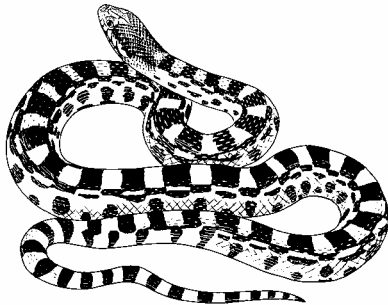
**Mammals:** Current knowledge of the mammalian fauna of the park (Appendix E3) is limited and comes mainly from incidental observations of the more conspicuous species. To date, researchers have conducted some live-trapping, but no nocturnal road cruising, infrared-triggered photography or other systematic survey work has been undertaken.



Pocket Gopher  
*Geomys* sp.

The park's most conspicuous mammal is the black-tailed jackrabbit. Desert cottontail (*Sylvilagus audubonii*) is also seen regularly; spotted ground squirrel (*Spermophilus spilosoma*), desert pocket gopher (*Geomys arenarius*), coyote (*Canis latrans*), gray fox (*Urocyon cinereoargenteus*), raccoon (*Procyon lotor*) and striped skunk (*Mephitis mephitis*) less so. When water is present, muskrat (*Ondatra zibethicus*) and beaver (*Castor canadensis*) use the water-delivery channels in the park.

**Amphibians & reptiles:** Present knowledge of the park's herpetofauna (Appendix E3) is incomplete. The commonly observed lizards are the little striped whiptail (*Cnemidophorus inornatus*), prairie lizard (*Sceloporus undulatus*) and side-blotched lizard (*Uta stansburiana*). Also present but seen less often is the Texas horned lizard (*Phrynosoma cornutum*), a state-listed threatened species.



Gopher Snake  
*Pituophis catenifer*

Snakes observed include Great Plains rat snake (*Elaphe emoryi*), night snake (*Hypsiglena torquata*), common kingsnake (*Lampropeltis getula*), coachwhip (*Masticophis flagellum*), gopher snake (*Pituophis catenifer*) and checkered garter snake (*Thamnophis marcianus*). The common turtle seen in the park's vicinity is the spiny softshell (*Trionyx spiniferus*), observed regularly in the Riverside Canal but only sporadically seen in the park.

Red-spotted toad (*Bufo punctatus*), Woodhouse's toad (*Bufo woodhousii*) and Couch's spadefoot (*Scaphiopus couchii*) have all have been observed at the park. In years when no spring-summer water is available, these species take advantage of ephemeral rain-fed pools and moist areas maintained by seepage from the Riverside Canal. Bullfrogs (*Rana catesbeiana*) first appeared in 2000, when water persisted all summer at several of the park's water-control gates. During 2001 and 2002, with water present throughout spring and summer, this species became fairly common.

## Restoration Projects Undertaken to Date

Following construction of the wetland cells and water-delivery system, in 1998 UTEP began restoration efforts, including both establishing native species and controlling exotic species. Much of the work has concentrated along the historic river channel that is now the main water channel through the park. Each winter since 1999, clusters of Rio Grande cottonwood, coyote willow and Goodding willow (*Salix gooddingii*) poles have been planted along the channel. Other plantings include rooted seepwillow cuttings and plugs of inland saltgrass at a variety of sites along the main channel and overflow channel. During the summer of 2002, ten Western Honey Mesquite trees (*Prosopis glandulosa*) were planted in the eastern end of the park along trails nearby the park's proposed visitor center. To document progress in site restoration, 28 permanent photographic stations were established within the park.

With the exception of the honey mesquite trees that were acquired from a local nursery, and the cottonwood and willow poles that were obtained from Bosque del Apache National Wildlife Refuge in 2001, all plant materials have been obtained locally. In 1999 and 2000, water was trucked to the park regularly in spring and summer to ensure establishment of the plantings. These plantings are intended to provide source populations from which the species can spread through natural regeneration if and when year-round water is obtained for the park. The reestablishment of native species will be further enhanced if water flows can be managed to mimic springtime overbank flooding events characteristic of the natural hydrograph of the Rio Grande. In 2001, when water flowed through the channel in spring and summer, cottonwoods, willows, seepwillow and other native riparian species began to spread to new areas along the channel.

In 2000, scouringrush (*Equisetum hyemale*) was collected from a nearby irrigation lateral and transplanted along the main water channel in the park. These plants did well as long as water flowed through the channel but died after the flows ended despite weekly watering. Future efforts to establish scouringrush will likely await the presence of year-round water in the park.

In 2001, four plots, ranging in size from 0.25 to 0.75 acres, were seeded with a mix of eight native grass species and irrigated intermittently during the summer with water pumped from the park's main water channel. Only one plot was irrigated often enough to permit extensive seed germination, and the plants that did appear on this



Western Honey Mesquite  
*Prosopis glandulosa*

plot were quickly lost to jackrabbits. Future grass seeding efforts may employ smaller areas with jackrabbit-proof exclosures and more frequent irrigation.

Even though the IBWC removed a large amount of saltcedar during the initial project construction in 1997, this species remains common in the park. Saltcedar-removal efforts undertaken thus far have concentrated along the main channel and in previously cleared areas where trees have re-grown from incompletely removed root systems or where new seedlings are appearing. Removal methods depend on the size of the tree and include mechanical removal using hand tools, application of Garlon 4™ (triclopyr) to cut stumps, and foliar application of 1% Arsenal® (imazapyr), or a 0.5% Arsenal® and 0.5% Rodeo® (glyphosate) formulation. Limbs from the removed saltcedar have been used to build barriers to exclude vehicle traffic from areas targeted for future restoration.

Other control efforts have been directed at two other exotic species: Russian thistle and perennial pepperweed (*Lepidium latifolium*). Russian thistle is widespread in the park. It has been removed from selected areas mechanically and by burning. Perennial pepperweed is currently present only in isolated pockets. In 2002, areas containing pepperweed were treated using a 1% Oasis® (imazapic/2,4-D) formulation.

## Community outreach

UTEP began offering public tours at the park in October 1999. Currently, one introductory tour and one birding tour are offered each month. Staff members from UTEP's Center for Environmental Resource Management (CERM) also give group tours for school classes, community organizations and others on request. In 2000, approximately 160 people took part in the monthly public tours, 52 in 2001, and 37 during the first 6 months of 2002. Special group tours were provided to 425 people in 2000, 145 in 2001, and 138 through the first six months of 2002.

In March 2000, CERM staff began holding monthly community workdays to give citizens a chance to get directly involved in habitat management at the park. Some 70 individuals took part in these workdays in 2000, 76 in 2001, and 50 during the first 6 months of 2002. CERM staff also have given formal presentations about Rio Bosque Wetlands Park to a wide range of groups, from school classes to civic organizations to professional associations. Approximately 750 attended these presentations in 2000, 100 in 2001, and 130 during the first six months of 2002.

Two community meetings have been held to solicit public input regarding the plans for the park's development. The first meeting was held at Socorro High School on January 20, 2001, and included tours of the park. Over 130 people participated in this event. On Saturday, January 26, 2002, a second community meeting was held in a shelter that was erected in Rio Bosque Wetlands Park. Between 120 and 150 people attended this second event. Comments from both meetings were used to refine the master development plan for the park.



Break-out session discussion during a 2001 community meeting

In May of 2002, CERM staff, with the assistance of the National Park Service's Rivers and Trails Program, helped form an organization called "Friends of the Rio Bosque" to assist in a variety of capacities including trail construction, clean-up activities, saltcedar eradication, revegetation efforts, and providing guided tours to park visitors.



School children at Rio Bosque Wetlands Park



Volunteer tour guides