

# RECLAMATION

*Managing Water in the West*

## Escondida Drain Rehabilitation Environmental Assessment

Middle Rio Grande Project, New Mexico



**U.S. Department of the Interior  
Bureau of Reclamation  
Albuquerque Area Office  
Environment Division  
Albuquerque, New Mexico**

**October 2008**

## **MISSION STATEMENTS**

The mission of the Department of the Interior is to protect and provide access to our Nation's natural and cultural heritage and honor our trust responsibilities to Indian Tribes and our commitments to island communities.

The mission of the Bureau of Reclamation is to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public.

**U.S. Department of the Interior**  
**BUREAU OF RECLAMATION**  
**Albuquerque, New Mexico**

**Albuquerque Area Office**  
**Upper Colorado Region**

***Finding of No Significant Impact***  
Environmental Assessment

**Escondida Drain Rehabilitation Project;**  
**Middle Rio Grande Project, New Mexico**

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Manager, Environment Division

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Date

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Area Manager, Albuquerque Area Office

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Date

AAO-08-011  
FONSI Number

## **Background**

Escondida Drain is located approximately five miles northeast of Socorro, New Mexico on the east side of the Rio Grande, near Pueblitos, New Mexico, in Socorro County.

During the summer of 2006, record rainfall within the Escondida Drain area caused flood damage to the drain and adjacent arroyos. The drain has become overgrown and the outfall has become plugged from sediment. Because of the lack of maintenance, the drain presently does not function as designed. Maintenance is needed to overcome these current problems within the system.

The Bureau of Reclamation, in cooperation with the New Mexico Interstate Stream Commission (ISC), periodically maintains riverside drains outside the Middle Rio Grande Conservancy District (MRGCD) to facilitate water delivery. This work is authorized under the Middle Rio Grande Project approved by the Flood Control Act of June 30, 1948 (Public Law 858, 80<sup>th</sup> Cong., 2d sess.). Completion of the approved plan was authorized by the Flood Control Act of May 17, 1950 (Public Law 516, 81<sup>st</sup> Cong., 2d sess.).

## **Summary of the Proposed Action**

The proposed Phase IIA and IIB drain work includes removing vegetation and reestablishing the channel's original grade to improve its hydraulic efficiency. Drain work would be performed from Pueblito Road to the outfall at the Rio Grande, a distance of approximately 3.3 miles.

Environmental impacts are discussed in the attached Environmental Assessment (EA).

Environmental Commitments are included in the attached EA.

## **CONCLUSION**

In accordance with the National Environmental Policy Act of 1969 (NEPA), as amended, and based on the analysis in the EA, the Bureau of Reclamation has determined that implementing the preferred plan presented in the attached EA would not result in significant impact on the human environment and does not require preparation of an Environmental Impact Statement (EIS).

# BUREAU OF RECLAMATION

UPPER COLORADO REGION  
ALBUQUERQUE AREA OFFICE  
Environmental Assessment

**EA Number: AA0-08-011**

## **Escondida Drain Rehabilitation Project**

This Environmental Assessment (EA) has been prepared in accordance with the National Environmental Policy Act (NEPA) [42 U.S.C. 4321, et seq.].

### **Location of Proposed Action:**

Escondida Drain is located approximately five miles northeast of Socorro, New Mexico on the east side of the Rio Grande, near Pueblitos, New Mexico, in Socorro County (Figure 1) - (USGS Quad entitled Loma de Las Cañas, Township 2S, Range 1 East). All access would be from existing roads to the site and along the Escondida Drain levee.

## **I. Introduction**

During the summer of 2006, record rainfall within the Escondida Drain area caused flood damage to the drain and adjacent arroyos. The drain has become overgrown and the outfall has become plugged from sediment. The Bureau of Reclamation, in cooperation with the New Mexico Interstate Stream Commission (ISC), periodically maintains riverside drains outside the Middle Rio Grande Conservancy District (MRGCD) to facilitate water delivery. This work is authorized under the Middle Rio Grande Project approved by the Flood Control Act of June 30, 1948 (Public Law 858, 80<sup>th</sup> Cong., 2d sess.). Completion of the approved plan was authorized by the Flood Control Act of May 17, 1950 (Public Law 516, 81<sup>st</sup> Cong., 2d sess.).

### **A. Purpose and Need for the Action**

The record rainfall, received during the summer of 2006 within the Escondida Drain area, caused flood damage to the drain and adjacent arroyos. Previous work along Arroyo de los Piños, which was completed under Phase I work, stabilized the Arroyo de los Piños embankments from failure. The proposed Phase IIA and IIB drain work (Figure 1), which includes removing vegetation and reestablishing the channel's original grade, would improve the hydraulic efficiency. Presently the estimated water salvage is not calculable due to variation in rainfall, return flows from landowners, and local vegetation growth. The drain was originally designed to salvage 20 cubic feet per second (cfs). Any additional flows to the Rio Grande, no matter how small, could potentially benefit the Rio Grande silvery minnow (*Hybognathus amarus*) which occupies the river adjacent to the project area. Reclamation would employ Best Management Practices (BMPs) to avoid adverse effects to endangered species. Drain work would be performed from Pueblito Road to the outfall, a distance of approximately 3.3 miles.

Several of the landowners are complaining that their properties are being affected due to the improper drainage. Because of the lack of maintenance, the drain presently does not function as designed. Maintenance is needed to overcome these current problems within the system.

## II. Description of Proposed Action and Alternatives

### A. No Action Alternative

The no action alternative would involve not taking any measures to prevent the continued deterioration of the Escondida Drain system. Vegetation would continue to grow on the drain's embankments and develop more solidly on the road and adjacent areas. Sediment, which currently impedes the drain's outfall, would continue to act as a barrier preventing water from returning back to the river. Both access and functionality of the drainage system would be severely impaired over time.

### B. Proposed Action/Preferred Alternative

Reclamation, in cooperation with ISC, proposes to improve the drain system by removing vegetation from the drain prism and within Reclamation's easement. Work would also include reestablishing the drain's original design grade and improving access roads and west spoil levee for operation and maintenance (O&M) activities. By removing the drain's vegetation and reestablishing the drain's original grade, improved hydraulic efficiency would result in additional drainage flows (unable to quantify number) to the river that would not be immediately diverted.

The proposed work would be constructed in two different phases. Under Phase IIA, the drain's outfall to the Rio Grande would be reestablished. The work under Phase IIB would include removing vegetation, reestablishing the drain's original design grade, and improving access roads and west spoil levee for O&M activities. In addition, existing road crossings, gates and fencing would be replaced as necessary. It is estimated that construction activities would take approximately four months to complete Phase IIA and IIB work.

During the drain construction and O&M activities, access would be obtained along each side of the drain utilizing the O&M access roads. An optional access route is through Arroyo de los Piños. The access roads would also be utilized as staging areas

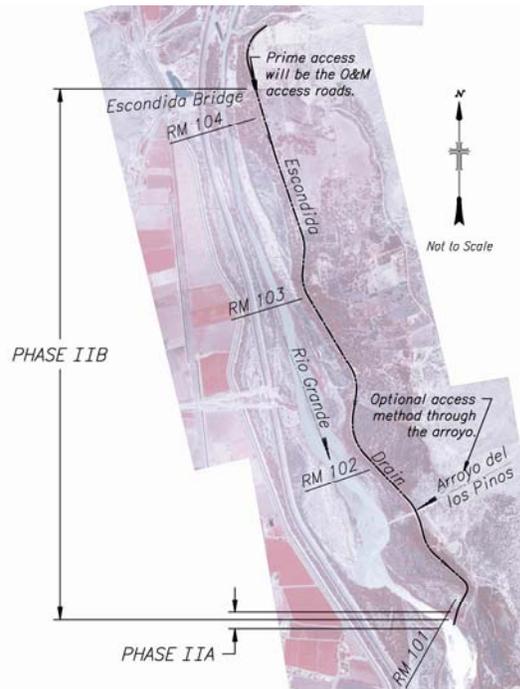


Figure 1. – Escondida Drain Rehab Phases IIA & IIB

for equipment and materials during construction and O&M phases. If additional staging areas are needed, Reclamation has acquired easements along Arroyo de los Piños on private landowner's properties. Water for construction and O&M activities, such as dust abatement, would be acquired from Escondida Drain and not the Rio Grande.

### Phase II Work

During Phase II work, which includes the Escondida Drain Outfall work, fences built parallel to the drain within Reclamation's right of way and interfering with the proposed work, would be removed. Work would also include vegetation removal which includes mowing and removing existing vegetation from the drain invert, embankment slopes, and access roads for approximately 0.3 of a mile. Brushing activities would be performed between October and March to avoid migratory birds. The project area consists of a mixture of saltcedar (*Tamarix* sp.) and Russian olive (*Elaeagnus angustifolia*) with scattered cottonwood (*Populus deltoides* var. *wislizeni*) adjacent to and within the drain slope, with cattails (*Typha* sp.) being the predominant emergent vegetation in the interior of the drain.

The easement width along Escondida Drain varies in width from 125 to 300 feet. The mowed vegetation material would be spread out along the access roads and channel prism. Vegetation placed on the road would be chipped and blended with the excavated material from the drain invert and spread over the access road and spoil levee surfaces.

### Phase IIA Work

Escondida Drain Outfall work (Figure 2) would require excavating and reestablishing approximately 0.3 miles of the Escondida Drain above the Rio Grande's adjacent high water mark. About 200 feet of Escondida Drain would be excavated to connect the drain with the Rio Grande.

During the excavation of the outfall, no equipment would work in the Rio Grande's active channel or make contact with waters of the Rio Grande. When excavation of the outfall takes place, excavation will be allowed within three inches of the waters of the Rio Grande. After this point, personnel may breach the small sediment berm using hand shovels. The earthen materials would be placed out of the drain on the upland areas, away from the river channel.

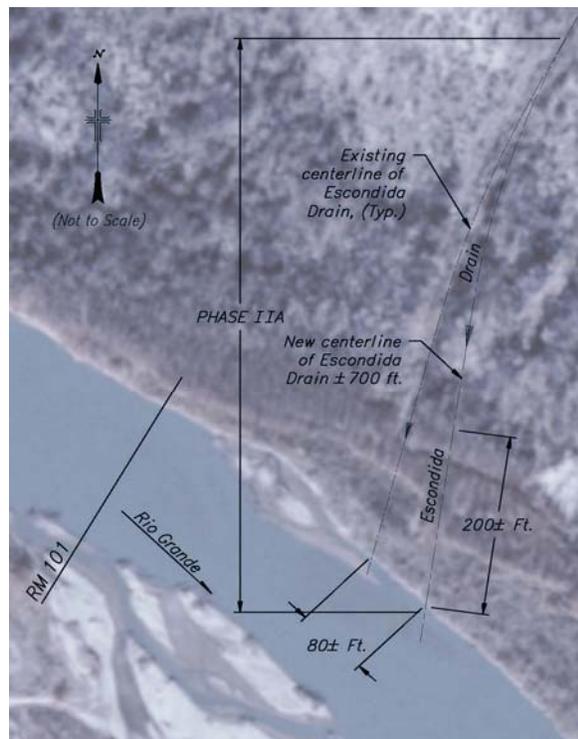


Figure 2. – Escondida Drain Phase IIA (Outfall)

The outfall would be a trapezoidal channel with a bottom width of 12 feet and side slopes of 2:1 (Figures 3 and 4).

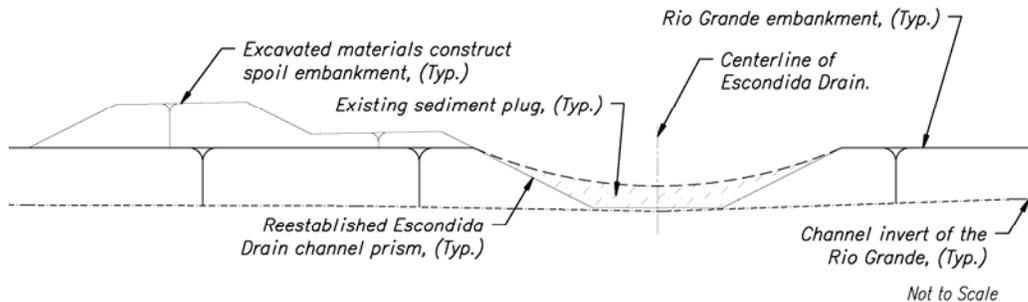


Figure 3. – Escondida Drain Outfall Elevation

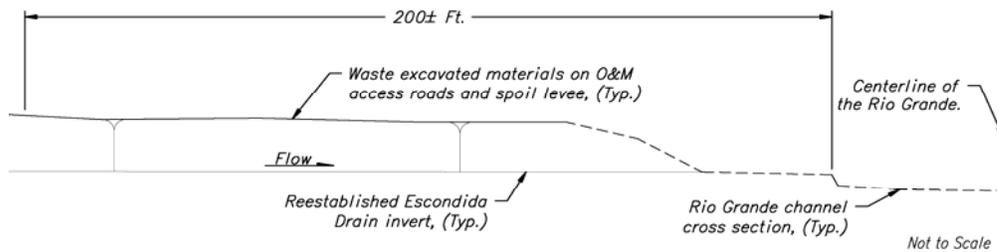


Figure 4. – Escondida Drain Outfall Channel Profile

### Phase IIB Work

This work is scheduled to start after Phase IIA is substantially completed. This work includes removing vegetation, reestablishing access roads, replacing existing road crossings and gates for approximately 3.3 miles of drain. Up to 12 gate crossings, along Reclamation's drain easement, may required replacing and would consist of two types: a pipe or wire pull.

In addition, under Phase IIB, the existing corrugated metal pipe (CMP) culvert under Arroyo de los Piños would be extended on the north end a minimum of eight linear feet to a maximum of 16 linear feet. Additional fill materials would be removed from the arroyo to cover the pipe extension and lengthen the arroyo bank slope. The work is being performed to stabilize the arroyo northern embankment toe.

Vegetation removal would require mowing and removing existing vegetation from the drain invert, embankment slopes, and access roads. The removed vegetation material would be spread out on the access roads, chipped to small pieces, and blended with the excavated drain material. This material would then be spread over the access road surfaces. As needed, the existing road crossings would be replaced.

The existing access roads, reestablished during the vegetation removal processes, will have their final road surface grade sloped away from the drain. It is anticipated that additional road surfacing materials will not be required. If additional road surface materials are required for soft spots found along the O&M access roads, these materials would be hauled from existing approved sites.

To maintain drain efficiency, annual maintenance of the Escondida Drain is needed. Annual O&M activities should take at least 60 days to complete. It is anticipated that O&M activities would be performed after spring runoff and/or summer rains to remove sediments from the drain's outfall and allow drain to flow into the Rio Grande. Annual mowing of the drain and O&M access roads would be performed between September and March of each year. All future drain mowing activity will be approved by the Project Manager and Environmental staff. It is also anticipated, after high river flows have occurred, that the drain outfall will plug with sediment blocking off return drain flows to the Rio Grande. An excavator will remove the deposited materials as needed to maintain drain flows. Sediment materials will be wasted on the access roads and/or spoil levees. To the extent possible, this work will be performed in the dry. If the drain must be excavated in the wet, Reclamation will coordinate with the U.S. Fish and Wildlife Service (Service) prior to performing the work.

As resources become available, plans include replacing the existing road crossings as necessary to improve the drain efficiency. The replaced road crossings will be constructed with all backfill material compacted around the road crossing. Each culvert pipe will be fitted with a flared end-section and cutoff collar. If a cutoff collar is not used, soil-cement bedding would be utilized. A small quantity of riprap will be placed around the inlet and outlet of each culvert pipe.

### **III. Environmental Impacts**

#### **A) General Impacts**

Impacts of the proposed project include temporary construction effects: dust, noise and increased vehicle traffic to and from the site. None of these temporary impacts are significant on a local or regional scale.

During construction activities, water would be pumped from the drain to provide for dust abatement. Vegetation would be affected by the proposed clearing within the drain and within the outfall area. The project area consists of a mix of saltcedar (*Tamarix* sp.) and Russian olive (*Elaeagnus angustifolia*) with scattered cottonwoods (*Populus deltoids* var. *wislizeni*) adjacent to and also on the inside slope of the drain. Cattails (*Typha* sp.) are the predominant emergent vegetation in the interior of the drain. Wildlife utilizing these habitats include small mammals, birds, and reptiles. Russian olive, saltcedar, and cottonwood are utilized by a variety of bird species for foraging and as a nesting substrate. Cattails are in standing water and wet soils in the interior of the drain, typically provide nest sites for Red-winged Blackbirds (*Agelaius phoeniceus*) and Common Yellowthroats (*Geothlypis trichas*), two widely-distributed and abundant bird species.

Because of an abundance of these plant species in the proposed project area, loss of habitat resulting from vegetation clearing should not adversely affect overall animal populations. Vegetation that is proposed to be cleared for this project will take place in the period October – April to avoid affecting nesting bird species (pursuant to the Migratory Bird Treaty Act).

Critical habitat is designated for both the Rio Grande minnow and the Southwestern Willow Flycatcher in the general construction area. Southwestern Willow Flycatcher critical habitat will not be adversely affected by the proposed project because the drain and adjacent service road were excluded from the designation of critical habitat, see reference:

U.S. Fish and Wildlife Service. 2005. Designation of critical habitat for the Southwestern Willow Flycatcher (*Empidonax traillii extimus*), Federal Register 70:60886-61009.

Southwestern Willow Flycatcher. - The Escondida Drain project is located within the known breeding range of the endangered Southwestern Willow Flycatcher. Surveys for this bird species are conducted annually by Reclamation. Through 2007, these surveys have found no breeding pairs or territorial Southwestern Willow Flycatchers within the project area. The most recent Southwestern Willow Flycatcher survey efforts (summer 2008) found no breeding Southwestern Willow Flycatchers within the proposed project area. However, one unpaired male Southwestern Willow Flycatcher was found residing along the Rio Grande approximately 1200 feet west of the project area. The nearest nesting pair of Southwestern Willow Flycatchers to the proposed project is located approximately 18 miles upstream at the Sevilleta National Wildlife Refuge. The proposed project will occur adjacent to designated Southwestern Willow Flycatcher critical habitat (the Escondida Drain was excluded from designation).

Other activities associated with the proposed action (site access and staging areas, refueling equipment, pumping water, and jetty jack removal) will have no effects to Southwestern Willow Flycatchers. All of these activities will occur in areas away from existing habitat, and what habitat is in the proposed project area is unsuitable for occupation by Southwestern Willow Flycatchers.

The proposed action would therefore have no effect on Southwestern Willow Flycatchers through habitat alteration. Much of the proposed work involves mowing a narrow, linear strip of vegetation adjacent to and inside of the existing drain, with the primary vegetation type affected being cattails, a plant species not utilized by Southwestern Willow Flycatchers.

Because extensive annual surveys for Southwestern Willow Flycatchers are conducted throughout the proposed project area, any suitable and newly-occupied habitat will be known. This knowledge will then be used to coordinate maintenance activities to avoid working in those areas during the breeding season and to avoid affecting habitat at any time of year. Therefore, avoidance of areas adjacent to the drain will be the most

effective strategy to ensure that Southwestern Willow Flycatchers are not affected by the proposed activities.

Drain construction and maintenance activities will not occur between May-June 15, therefore, in considering the above effects, Reclamation determined the proposed action will have no effects on the Southwestern Willow Flycatcher. The proposed action will have no effect on designated critical habitat for the Southwestern Willow Flycatcher.

Rio Grande Silvery Minnow. - The project work would be performed under dry conditions and therefore construction activities for the project would have no effects on the Rio Grande silvery minnow.

Work on the drain, within the minnow critical habitat, is likely to result in a small increase of topographic variability on the river’s sediment pointbar. Construction and maintenance is not likely to have effects on minnow habitat quantity, quality, or availability at the drain outfall; however the effects are considered negligible and therefore, Reclamation has determined the project would have no effect on silvery minnow critical habitat.

#### IV. Summary Analysis

**Table 1. Environmental impact analysis; summary of significant impacts between the No Action and Proposed Alternative (significant impact is defined by CEQ regulation).**

ENVIRONMENTAL COMPONENT	ALTERNATIVE		DISCUSSION
	NO ACTION	PROPOSED	
Air Quality	No	No	Project area is not in a non-attainment zone.
Cultural Resources	No	No	Previously disturbed project location; no cultural resources are known to be present.
Environmental Justice	No	No	The proposed action would not disproportionately affect poorer components of the community.
Farmlands, Prime/Unique	No	No	None
Floodplains	No	Yes	The floodplain outfall (outlet to the river) would be modified to allow drainage flows to return to the Rio Grande.
Hazardous Materials	No	No	None
Indian Sacred Sites	No	No	None present
Indian Trust Assets (ITAs) <small>(ITAs are legal interests in property held in trust by the United States for Indian tribes or individuals. Examples of things</small>	No	No	None present

that may be trust assets are lands, minerals, hunting and fishing rights, and water rights. This trust responsibility requires that all federal agencies, including Reclamation, take all actions reasonably necessary to protect trust assets. This duty requires Reclamation to carry out its activities in a manner which avoids adverse impacts to ITAs when possible).			
Federally listed threatened and endangered species/critical habitat	No	No	Proposed work would be performed in the dry so that there are no effects to the Rio Grande silvery minnow during construction. The Southwestern Willow Flycatcher would not be affected by the proposed action as no habitat is present where work would be performed. Brushing would be performed between October and April to avoid impacts to all migratory birds including the Southwestern Willow Flycatcher.
Water Quality	No	No	Work would be performed in the dry and therefore no effects are expected.
Wetlands/Riparian Zones	No	Yes	Riparian vegetation would be cleared adjacent to the drain and the outfall. For a drain to properly function, the vegetation requires removal.

A. No Action Alternative

Without a proper drainage system, drain flow would not reach the Rio Grande due to lack of drain channel maintenance. Restricted flows could result in a high water table within the project area and resulting in lack of proper drainage.

B. Proposed Action/Preferred Alternative

Proper flow drainage from Escondida Drain into the Rio Grande, cannot be quantified, but any water that makes it way into the river is valued. The Preferred Action is to reestablish a functional drain.

No other long term or significant impacts are foreseen with the proposed project. Vegetation impacts are considered minor and are insignificant. Critical habitat is designated for both the Rio Grande silvery minnow and the Southwestern Willow Flycatcher in the general construction area. There will be “no effect” to Southwestern Willow Flycatcher or its critical habitat. A “no effect determination” for Rio Grande

silvery minnow or its critical habitat has been made by qualified wildlife biologists, as construction would be performed in the dry.

### C. Cummulative Impacts

No cumulative impacts from the project are anticipated.

### D. Environmental Commitments

- 1) All equipment to be used on this project will be power washed prior to its arrival on the project site and will be power washed prior to removal from the project site.
- 2) Work would be performed in the dry.
- 3) Brushing activities would be performed between October and April to avoid migratory birds.
- 4) Reclamation will continue to conduct annual Southwestern Willow Flycatcher surveys following established protocol and will conduct fish community surveys annually.
- 5) Avoidance of suitable/occupied Southwestern Willow Flycatcher habitat will occur throughout the future maintenance and construction activities utilizing the annual survey results in conjunction with revised habitat mapping. Coordination and consultation with the Service will be performed as needed.
- 6) During construction activities, water will be pumped from the drain to provide for dust abatement.
- 7) All excavators and fuel transporters have fuel spill kits and equipment operators trained in the event of a spill. Regular update sessions on use of the kit and spill prevention measures will take place with equipment operators.
- 8) Should evidence of possible scientific, prehistorical, historical, or archeological data be discovered during the course of this action, work shall cease at that location and the Albuquerque Area Office archaeologist shall be notified by phone (505-462-3644) immediately, with the location and nature of the findings. Care shall be exercised so as not to disturb or damage artifacts uncovered during operations, and the proponents shall provide such cooperation and assistance as may be necessary to preserve the findings for removal or other disposition by the Government.

Discovery of Human Remains. Any person who knows or has reason to know that he or she has inadvertently discovered human remains on Federal or tribal lands, must provide immediate telephone notification of the inadvertent discovery, with written confirmation, to the responsible Federal agency official with respect to Federal lands, and, with respect to tribal lands, to the responsible Indian tribe official. The requirement is prescribed under the Native American Graves Protection and Repatriation Act (P.L. 101-601; 104

Stat. 3042) of November 1990 and National Historic Preservation Act, Section 110(a)(2)(E)(iii) (P.L. 102-575, 106 Stat. 4753) of October 1992.

**V. Consultation and Coordination**

Jim Wood, Corps of Engineer (former employee)  
Jennifer Parody, U.S. Fish and Wildlife Service

**VI. List of Preparers**

Nancy Umbreit, Environmental Protection Specialist

**VII. Distribution List**

Landowners may view this document at <http://www.usbr.gov/uc/albuq/envdoc> or by obtaining a copy at Reclamation's Socorro Field Office.