### 3.2.6 Indian Trust Assets

Indian Trust Assets (ITAs) or resources are defined as legal interests in assets held in trust by the U.S. Government for Native American Indian tribes or individual tribal members. Examples of ITAs are lands, minerals, water rights, other natural resources, money, or claims. An ITA cannot be sold, leased, or otherwise alienated without approval of the Federal government. The project area is located primarily on Native American Indian Trust lands as part of the Pueblo of Cochiti.

### 3.2.7 Cultural Resources

Section 106 consultation with the New Mexico SHPO will be handled under the terms of a Programmatic Agreement, which sets out guidelines for the consultation process regarding Middle Rio Grande river maintenance projects. Native American tribes were consulted for the Programmatic Agreement. A copy of this Programmatic Agreement is contained in Appendix A.

### 3.2.8 Air Quality and Noise

The Clean Air Act of 1970, as amended, established National Ambient Air Quality Standards (NAAQS) (40 CFR 1 § 81.332) to protect the public from exposure to dangerous levels of several air pollutants. Sandoval County is in Air Quality Control Region (AQCR) 152 – Albuquerque – Mid Rio Grande. The AQCR 152 has been classified as an attainment area for all air pollutants identified in the NAAQS (eCFR 2005). Because of this classification for Sandoval County, the proposed project located on the Pueblo of the Cochiti is not subject to EPA requirements for ambient monitoring. The project area is occasionally used by people driving utility vehicles along the east levee, which results in the generation of a small amount of exhaust and fugitive dust during dry conditions.

## Chapter 4. ENVIRONMENTAL CONSEQUENCES

### 4.1. Introduction

This chapter discusses the predicted achievement of the objectives, effects, and cumulative effects for each alternative in section 2.4 of Chapter 2. Included is a discussion of each alternative's effect on relevant issues summarized in section 1.6 (issues) and resources described in section 3.2.

### 4.2. Predicted Attainment of Project Objectives for Each Alternative

#### No Action

Under the no action alternative, the project objectives would not be attained. The river would continue to erode the east stream bank at river mile 228.9 until the levee breaches. In addition, at river mile 231.3 the west bank would continue to erode eventually causing damage to the road and Cochiti Pueblo land.

### Proposed Action

Under the proposed action alternative, the project objective at River Mile 231.3 of preventing damage to a road and agricultural fields would be achieved. Included in the work would be the removal of jetty jacks, stabilization of the west bank, and installing underground drainage to halt sinkhole formation. At River Mile 228.9, protecting the east levee system would be achieved. The work would included creating an oxbow, a secondary channel with a dike, and bank stabilization. In addition, would satisfy habitat needs described in the Biological Opinion addressing Reclamation's river maintenance activities (U.S. Fish and Wildlife Service, 2003).

## 4.3. Predicted Effects on Each Relevant Issue and Resources

### 4.3.1. Native Vegetation

#### No Action Alternative

Under the no action alternative, existing vegetation, including native and non-native species, would remain in place.

#### Proposed Action Alternative

Any existing trees or shrubs removed at the beginning of construction would be replaced as specified in section 2.3.1 under Vegetation Planting. These new trees and shrubs would be spaced irregularly throughout the project area in appropriate locations to improve their potential for survival and to create a more natural condition. All pole plantings would be caged with wire initially to prevent beaver damage. In addition, all containerized plantings would include a watering tube made of plastic pipe to facilitate deep watering of these plants.

Native grasses and wildflowers would be seeded in areas disturbed by construction to re-establish vegetation. Only the amount of the proposed staging and stockpiling areas needed would be used or disturbed. Upon completion of stabilization activities, all work areas would be cleaned up and all materials and equipment removed. These areas would be reseeded as discussed in Section 2.3.1. The re-establishment of vegetation would be monitored and irrigation water would be brought in by truck, if necessary, to ensure the successful establishment of seeded areas.

#### Secondary and Cumulative Effects

There would be no secondary effects to vegetation as a result of the proposed action. The effects of the proposed action in combination with work at the Cochiti Priority Sites 231.3 and 228.9 over time, likely would result in an overall improvement in the quality of the local floral and faunal health. The short-term cumulative effects of construction would be small in the overall regional context and temporary in nature.

### 4.3.2. Wildlife including Threatened and Endangered Species

**No Action Alternative**

Since this alternative would not include any construction activities, effects to wildlife including threatened and endangered species would not occur.

**Proposed Action Alternative**

**Mammals**:

Although construction activities may scare existing wildlife away temporarily, most animal species in the project area would be able to return after project completion. Some mortality of less mobile species would be expected but not in quantities that would damage local populations. The improved quality of the habitat after new vegetation becomes established would offset these losses over time.

The effects of the proposed action on the Rio Grande Silvery Minnow, the Bald Eagle, and the Southwestern Willow Flycatcher are summarized below. The Biological Assessment (Appendix B) has been submitted to the Service for this proposed action under section 7 of the Endangered Species Act.

**Rio Grande Silvery Minnow**:

This effects determination considers population status of the minnow in the Cochiti reach, and possibility of individuals occurring in the vicinity of excavation equipment. Since the minnow is considered to be extirpated from this reach or possibly persist at undetectable population densities, the Fish and Wildlife Service considers the likelihood of silvery minnows being present in either construction area to be small and discountable (J. Parody pers. comm.). The construction of the proposed action would not result in adverse effects on minnow critical habitat. The project would result in an increase in potential habitat for the species, anticipating future re-introduction efforts in cooperation with the pueblos or a rebound by the local population.

The construction techniques in the proposed action are designed to minimize contact with any fish and minimize potential for harm or harassment. The construction sequence would allow fish present in the work area to move freely to avoid contact with the equipment or personnel. Personnel would operate equipment to facilitate avoidance and escapement by fish in the construction area based on normal predator avoidance behavior.

The project would have no effect on the minnow because it is considered to be extirpated from this reach. The construction of the proposed action and any dewatering of off-channel areas would not result in adverse effects on minnow critical habitat.

**Southwestern Willow Flycatcher:**

The proposed action would have no adverse effects on the Southwestern Willow Flycatcher or its designated critical habitat based on the distance to occupied habitat and the fact that minimal

existing vegetation would be disturbed by the proposed activity. Additionally, the proposed action would result in the planting of riparian/wetland communities in newly created areas that could eventually mature and create potentially suitable Southwestern Willow Flycatcher habitat. Therefore, the proposed action may affect, but is not likely to adversely affect, the Southwestern Willow Flycatcher.

**Bald Eagle:**

Potential roosting and perching structures would not be impacted by the proposed action, since existing native vegetation would be protected. Additionally, implementation of the proposed river maintenance activities would likely create suitable conditions for the Bald Eagle's prey base by creating a secondary channel with slower water velocities and planting riparian and wetland vegetation on newly created areas. Newly created habitat for its prey base may attract Bald Eagles to the project area.

**Secondary and Cumulative Effects**

There would be no adverse secondary effects to southwestern willow flycatcher or bald eagle as a result of the proposed action. Because there would be no adverse effects to the southwestern willow flycatcher from the proposed action, there would be no adverse cumulative effect when combined with other planned projects in the area. However, the proposed action would result in the planting of riparian/wetland communities in newly created areas that could eventually mature and create potentially suitable southwestern willow flycatcher habitat, which would be a beneficial secondary effect. Monitoring for bald eagle during this project and others would minimize any potential effect on this species. This project, in combination with other planned projects in the area, would not be expected to result in any adverse cumulative effects to bald eagles. Implementation of the proposed action would likely create suitable conditions for the bald eagle's prey base by creating a series of secondary channels with slower water velocities and planting riparian and wetland vegetation on newly created areas. This newly created habitat for its prey base would likely further attract the bald eagle to the project area, resulting in beneficial secondary effects.

Secondary effects of the proposed action for the Rio Grande silvery minnow include improving habitat quality within the secondary channels and other project features. The proposed action would result in an increase in potential habitat for the species, which may increase the local population abundance. The cumulative effects to Rio Grande silvery minnow should be beneficial, though difficult to quantify.

### 4.3.3. Noxious Weeds

**No Action**

Under the no action alternative, no ground-disturbing activities would be undertaken. Therefore, there would be no effect on existing noxious weed infestations.

**Proposed Action**

Whenever land is disturbed, the potential exists for the intrusion and establishment of noxious weeds. River Mile 231.3 portion of the project could disturb up to 21 acres and River Mile 228.9 could disturb up to 32 acres. To minimize the potential for the continued establishment and spread of State-listed and other noxious weeds, an aggressive revegetation plan would be

implemented. This plan, as described in Section 2.3.1 of this EA, would allow native species to become re-established more rapidly than they otherwise might. Past experience has shown that, over time, any noxious weeds that manage to gain a foothold in the project area would likely be crowded out by the more competitive native vegetation.

In addition to reseeding and planting, the introduction of noxious weed seeds would be minimized by a requirement that all equipment used on the project be pressure washed before arriving and leaving the site. Reclamation, in cooperation with the Pueblo of Cochiti, would monitor the project area following construction (5 years) for noxious weeds and treat them as necessary. By preventing the introduction of noxious weed seeds and pursuing an aggressive revegetation plan, the potential for noxious weeds becoming established in the project area over time would be minimal.

**Secondary and Cumulative Effects**

Addressing erosion problems at the Cochiti Priority Site would also require some ground-disturbing activities. Several acres of ground disturbance would occur at that site. Noxious weed seeds could be imported as part of that project. Through sound and aggressive revegetation planning and ensuring all equipment is pressure washed to prevent weed seed transmission, the opportunity for noxious weed establishment would be minimized. There would be no secondary effects to noxious weeds as a result of the proposed action.

### 4.3.4. Water Resources

**No Action**

Migration of the river at both priority sites would continue. Damage at River Mile 231.3 would include potential damage to agricultural fields, a road next to the river, and continual damage to the area as a result of potholes along the west bank. At River Mile 228.9, the river would continue to migrate to the east eventually breaching the levee.

Erosion of the river banks at both priority sites would continue to add a small amount of turbidity to the river downstream. When the levee at River Mile 228.9 ultimately fails, a large amount of soil would be deposited into the river and contribute adversely to the turbidity of the river for a brief period. Emergency measures to repair the levee and the east canal system would likely be carried out under less than desirable conditions, which could temporarily contribute further to turbidity in the river.

**Proposed Action**

During construction, the removal of vegetation in the project area could potentially result in erosion and contribute to additional turbidity in the river downstream of the project area; however, standard construction BMPs would be used to minimize runoff during this period. Consequently, most runoff would be contained within the active construction site. The re-establishment of native riparian vegetation in the project area following construction would ultimately reduce the project area's contribution to turbidity in the river. The Pueblo of Cochiti and Region 6 of the Environmental Protection Agency would specify project requirements for certification and compliance with Section 401 of the CWA.

**Secondary and Cumulative Effects**

The effects of the proposed action on erosion and water quality would be minor and temporary in nature; therefore, there would be no cumulative effects resulting from the combination of the proposed action and other anticipated projects. There would be no secondary effects to erosion and water quality as a result of the proposed action.

### 4.3.5. Environmental Justice

**No Action**
No effects of any kind to the local population are expected under the no action alternative. No adverse effects to low-income or minority populations are anticipated.

**Proposed Action**

No effects of any kind to the local population are expected under the proposed action. No adverse effects to low-income or minority populations are anticipated.

**Secondary and Cumulative Effects**

There would be no secondary effects concerning environmental justice as a result of the proposed action. Because no effects to the local population, either adverse or beneficial, are anticipated as a result of the proposed action, there would be no cumulative effect.

### 4.3.6. Indian Trust Assets

**No Action**
There would be no effects to ITAs under the no action alternative.

**Proposed Action**

The Pueblo of Cochiti Tribal Council has approved the Cochiti Priority Site Project proposed action. In addition, the Bureau of Indian Affairs has reviewed and provided comments on the proposed action to Reclamation. As such, there would be no effects to ITAs under the proposed action.

**Secondary and Cumulative Effects**

There would be no secondary effects to ITAs as a result of the proposed action. Because no effects to ITAs are anticipated as a result of the proposed action, there would be no cumulative effect.

### 4.3.7. Cultural Resources

**No Action**

There would be no effects to cultural resources or sacred sites under the no action alternative.

**Proposed Action**

There are no structures eligible for the National Register of Historic Places that would be affected by the proposed action. In addition, no sacred sites or traditional cultural properties are expected in the project area; however, should consultation with the tribes result in the identification of any such sites or properties, then Reclamation would consult with tribe(s) concerned to ensure no adverse effects result from the proposed action.

**Secondary and Cumulative Effects**

There would be no secondary effects to cultural and archaeological resources or sacred sites as a result of the proposed action. Because no effects to cultural or archaeological resources, sacred sites, or traditional cultural properties are anticipated as a result of the proposed action, there would be no cumulative effect on these resources.

### 4.3.8. Air Quality and Noise

**No Action**

There would be no effects to air quality or noise under the no action alternative.

**Proposed Action**

Fugitive dust generation from excavating and grading activities in the project area, along with exhaust emissions from heavy equipment and vehicles working on the project, are the only anticipated effects to air quality during construction. These temporary effects would not be expected to be significantly adverse. There would be no effects to air quality following completion of construction activities and re-establishment of vegetation in disturbed areas.

Fugitive dust would be suppressed by spreading water over disturbed areas where heavy equipment is working during dry conditions. Most nearby residences are far enough away from the project area that dust escaping from the immediate project area would dissipate before reaching them. Dust levels resulting from the proposed action would be expected to be lower than those generated by plowing and tilling activities on nearby farms and by construction Activities in nearby subdivisions. Exhaust emissions from heavy equipment and vehicles working on the project would dissipate rapidly before leaving the project area.

Noise from construction activities would exist during the project activities. However, noise from construction would not continue after the project is completed.

**Secondary and Cumulative Effects**

The effects of the proposed action on air quality and noise would be minor in the context of the local setting and temporary in nature; therefore, there would be no cumulative effects resulting from the combination of the proposed action and other anticipated projects. There would be no secondary effects to air quality and noise as a result of the proposed action.

### 4.3.9. Irreversible and Irretrievable Commitment of Resources of the Proposed Action

Some top soil would be removed from the project site, and would not be replaced in the same location at the end of the project. A small amount of wildlife habitat within the project area would be destroyed but would be replaced with a larger area of habitat as a result of bio-engineering bank line and revegetation activities of the proposed alternative. Construction equipment would utilize fuel and lubricants that would be permanently used.

## Chapter 5. CONSULTATION AND COORDINATION

The U.S. Fish and Wildlife Service (Service) participated in a field review of the project site and were informally consulted about any species of concern. The U.S. Army Corps of Engineers (ACOE) and New Mexico Environment Department (NMED) were consulted with regarding CWA Section 404 and 401, respectively. New Mexico Department of Game and Fish (NMDG&F) was consulted with through their website regarding any state protected animal species that could potentially occur in the project area. The New Mexico State Historic Preservation Office (NMSHPO) was consulted with by Reclamation to determine project compliance with state and federals laws (Section 106 of the National Historic Preservation Act (NHPA) regarding cultural resources in the project area. A government to government consultation was conducted with the Pueblo of Cochiti on August 24, 2006, to provide the governor and tribal counsel an opportunity to make comments or voice any issues or concerns regarding the proposed project. On October 25, 2007, a field trip to the priority sites was conducted with the Pueblo, Reclamation, and a representative from the Corps of Engineers.

## Chapter 6. Environmental Commitments

**6.1.** Construction of the stabilized bankline would be implemented during low flows to minimize the area of disturbance at the construction site.

**6.2.** All construction debris and waste would be disposed of at an approved landfill facility.

**6.3.** Best Management Practices would be implemented and utilized to prevent stormwater runoff and water pollution from entering the Rio Grande during construction activities.

**6.4.** If a Bald Eagle is visible at the project area in the morning before construction activities start or following breaks in construction activities, Reclamation would be required to suspend all activity until the Bald Eagle leaves of its own volition. If a Bald Eagle arrives during construction activities, construction would not be interrupted. If Bald Eagles are found consistently in the immediate project area during the construction period, Reclamation would contact the Service to determine whether formal consultation is necessary.

**6.5.** For the construction period January 15, 2008 to April 15, 2008, Reclamation would use an exclusion cage with ¼-inch hardware cloth enclosing the sides to screen the pump intake. The ¼-inch hardware cloth would exclude small silvery minnows and other fish