Chapter 3. Affected Issues and Environmental Resources

3.1 Introduction

A review of the two alternatives resulted in the identification of eight issues and environmental resources that either must be reviewed by law or could be affected by the proposed project or by taking no action. The eight issues and environmental resources identified correspond to those identified in Chapter 1, Section 1.5. This chapter describes the existing conditions for each issue and environmental resource.

3.2 Description of Relevant Affected Issues and Resources

3.2.1 Federal and State Listed Species

Initial consultation with the Service resulted in a list of federally protected species, candidate species and species of concern that are known to occur in Socorro County. Three federally protected species were identified that could potentially occur in the project area, the Bald Eagle, the Southwestern Willow Flycatcher, and the Rio Grande Silvery Minnow. Correspondence with the Service is contained in Appendix A. No known or potentially present state-listed protected species were identified in consultation with the NMDG&F (2004), and the NMRPTC (1999). Lists of rare plant and wildlife species known to occur in Socorro County are contained in Appendix B.

Although Bald Eagles are known to use the Rio Grande corridor during the winter, no eagles have been observed and no nests have been located in the project area. The project area is located in proposed critical habitat for the Southwestern Willow Flycatcher. Surveys following Service protocols for the flycatcher were conducted by Reclamation biologists on May 26, June 16, and July 13, 2004. No flycatchers were found in the project area and the habitat in the project area is not suitable for nesting. No Rio Grande Silvery Minnows were found during fish surveys performed in March and October 2004 by Reclamation fisheries biologists in the LFCC (Reclamation, 2004a). There are no known occurrences of any other federal or state-listed protected species of plants or animals in the project area.

3.2.2 Native Vegetation (Cottonwood & Goodding's Willow Trees) & Wildlife

Native vegetation in the project area is dominated by Rio Grande cottonwoods, Goodding's willows, New Mexico Olive (*Forestiera neomexicana*) and saltcedar (*Tamarix* spp.). Understory vegetation is typical of the southern floodplains portion of the Floodplain-Plains Riparian vegetation type described by Dick-Peddie (1993). This habitat is relatively common along the Rio Grande in the southern half of New Mexico, although acknowledged to be in decline as a result of human activities over the past two centuries. The primary human activities that have been identified as causing this decline are tree cutting and the impoundment of stream and river surface waters.

Mammal species common to the area include: coyotes, raccoons, bobcats, skunks, beavers, and various species of mice, rats, bats, rabbits and other small mammals. Birds that can be found in the region at different times of the year include: herons, ducks, turkey vultures, hawks, doves, hummingbirds, crows and numerous other species. A more complete list of animal species known to occur in the general area, obtained from the NMDG&F BISON-M database along with their scientific names, is located in Appendix B.

3.2.3 Noxious Weeds

No populations of state-listed noxious weeds have been observed in the project area during site visits or surveys. There are no known, documented occurrences of state-listed noxious weeds in the project area. A copy of the current state list of noxious weeds is in Appendix B.

3.2.4 Erosion Control and Water Quality

Turbidity, from erosion in the reach of the Rio Grande that flows through the project area, is greatest during periods of high runoff. High flow events from rainstorms or rapid snow melts in the mountains cause scouring of the banks and bottom of the Rio Grande as well as the streams and arroyos that empty into the river. This scouring results in high sediment loading and gradual erosion of the river's banks. Over time, this erosion leads to a natural tendency of the river to meander back and forth from side to side. Surface runoff adds to sediment loading and turbidity in the river.

Any activities that reduce or eliminate vegetation have the potential to result in erosion until new vegetation has become reestablished. The project area is surrounded by a region of rural farming and ranching. Farming activities such as plowing and tilling, and ranching activities such as livestock grazing often eliminate or reduce vegetation, even if only temporarily, and thus become a potential cause of sediment loading in the river during periods of high runoff.

The San Lorenzo Arroyo is a large runoff conveyance channel that passes directly through the center of the project area. The lack of vegetation in the bottom of the arroyo suggests relatively frequent scouring by high runoff events. The project area acts as a settling basin for sediment transported by the San Lorenzo Arroyo. The Lemitar Drain that parallels the western boundary of the project area protects the project area from surface runoff flowing downhill from the west. The water in this drain ultimately empties into the ponds at the Bosque del Apache National Wildlife Refuge, well to the south.

3.2.5 Air Quality

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. Socorro County is in Air Quality Control Region (AQCR) 156. AQCR 156 has been classified as an attainment area for all air pollutants identified in the NAAQS (eCFR, 2004). Because of this classification for Socorro County, the proposed project is not subject to Environmental Protection Agency (EPA) requirements for ambient monitoring. The project area is occasionally used by people driving recreational and utility vehicles, which results in the generation of a small amount of exhaust and fugitive dust in dry conditions.

3.2.6 Cultural and Archaeological Resources, and Sacred Sites

Reclamation consulted with the SHPO regarding the eligibility of the LFCC for the National Register of Historic Places. This consultation occurred in 2001 in a technical report prepared for Reclamation and the SHPO (Bischoff, 2001, Appendix A) that was intended to serve as mitigation for any adverse effects that may result from modifications to the LFCC. The SHPO responded with a letter of concurrence, a copy of which is contained in Appendix A.

There are no known sacred sites or traditional cultural properties in the project area. Tribal consultation is ongoing regarding the potential presence of any sacred sites or traditional cultural properties in the project area. A sample copy of the letter that was sent to the tribes is included in Appendix A.

3.2.7 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. There are no native American Indian Trust lands or assets in the vicinity of the proposed project site.

3.2.8 Environmental Justice

Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, requires that the effects on minority and low-income populations within a project area be given special consideration to determine if the proposed action would result in disproportionate adverse effects to their communities.

According to the most recent data from the Bureau of Economic Analysis (2004), the annual per capita income for the state of New Mexico in 2002 was $24,823. The 2002 annual per capita income for Socorro County was $18,577. According to the most recent data from the U.S. Census Bureau (2004), approximately 48 percent of the residents of Socorro County were Hispanic or Latino in 2000.