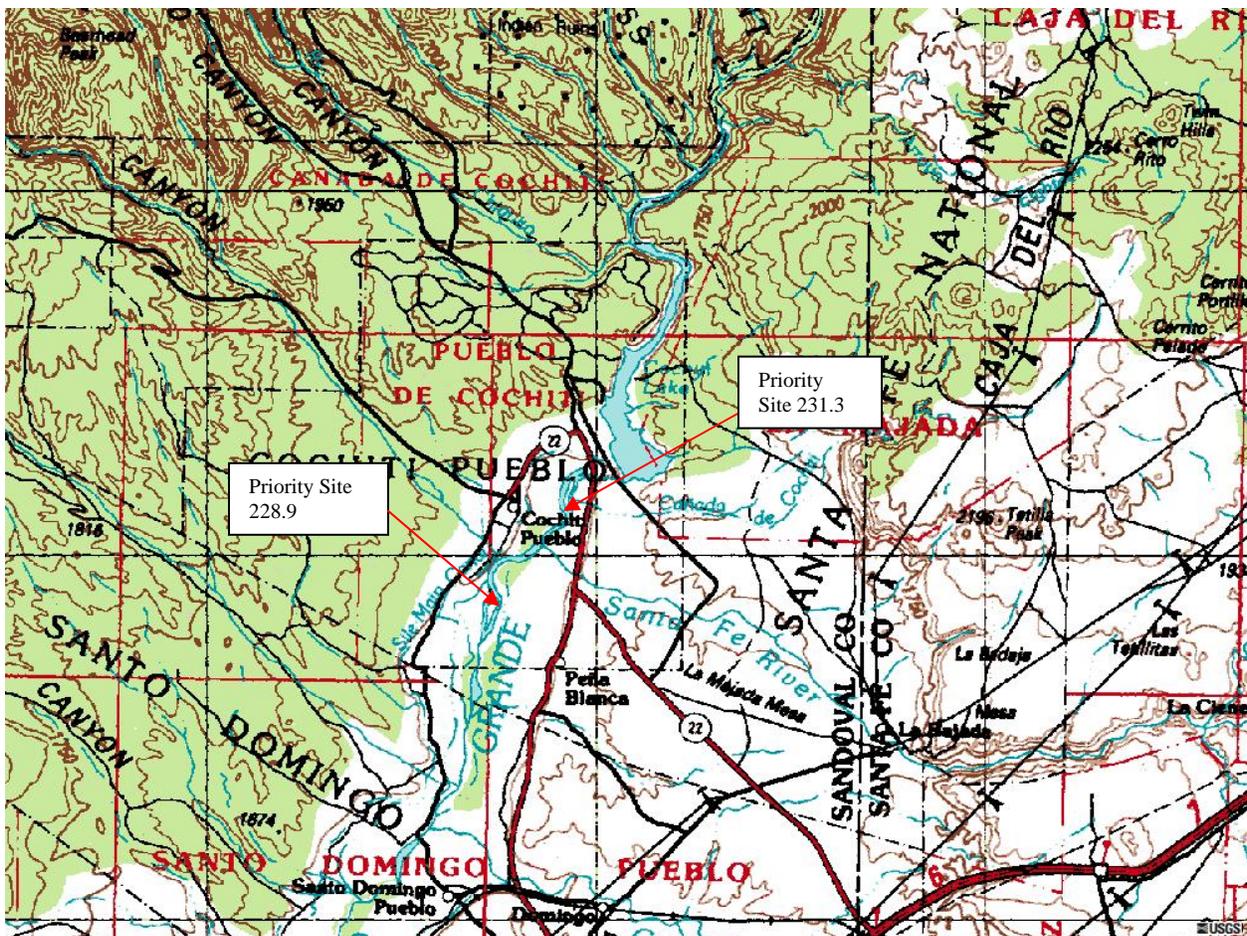


Chapter 1 PURPOSE AND NEED FOR ACTION

1.1. Introduction:

The Bureau of Reclamation has authority for river channel maintenance on the Rio Grande between Velarde, New Mexico, and the headwaters of Caballo Reservoir. Reclamation monitors changes in the river channel. The evaluations include channel and levee capacity in an effort to keep track of river maintenance priority sites that may provide damage to riverside facilities.

There are two priority sites on the Pueblo of Cochiti that require extensive maintenance: River Mile 231.3 about one mile down stream of the Cochiti Dam and River Mile 228.9 about three miles downstream of the dam (see map below). The maintenance activities of these priority sites are the focus of this environmental assessment.



1.2. Proposed Action

At River Mile 231.3, Reclamation proposes to protect a road and agricultural fields on the west side of the Rio Grande from damage caused by migration of the river and sinkhole formation. In addition, Reclamation also proposes to protect the east levee at River Mile 228.9 from damage caused by eastward migration of the river’s secondary channel (see figure 1, page 3).

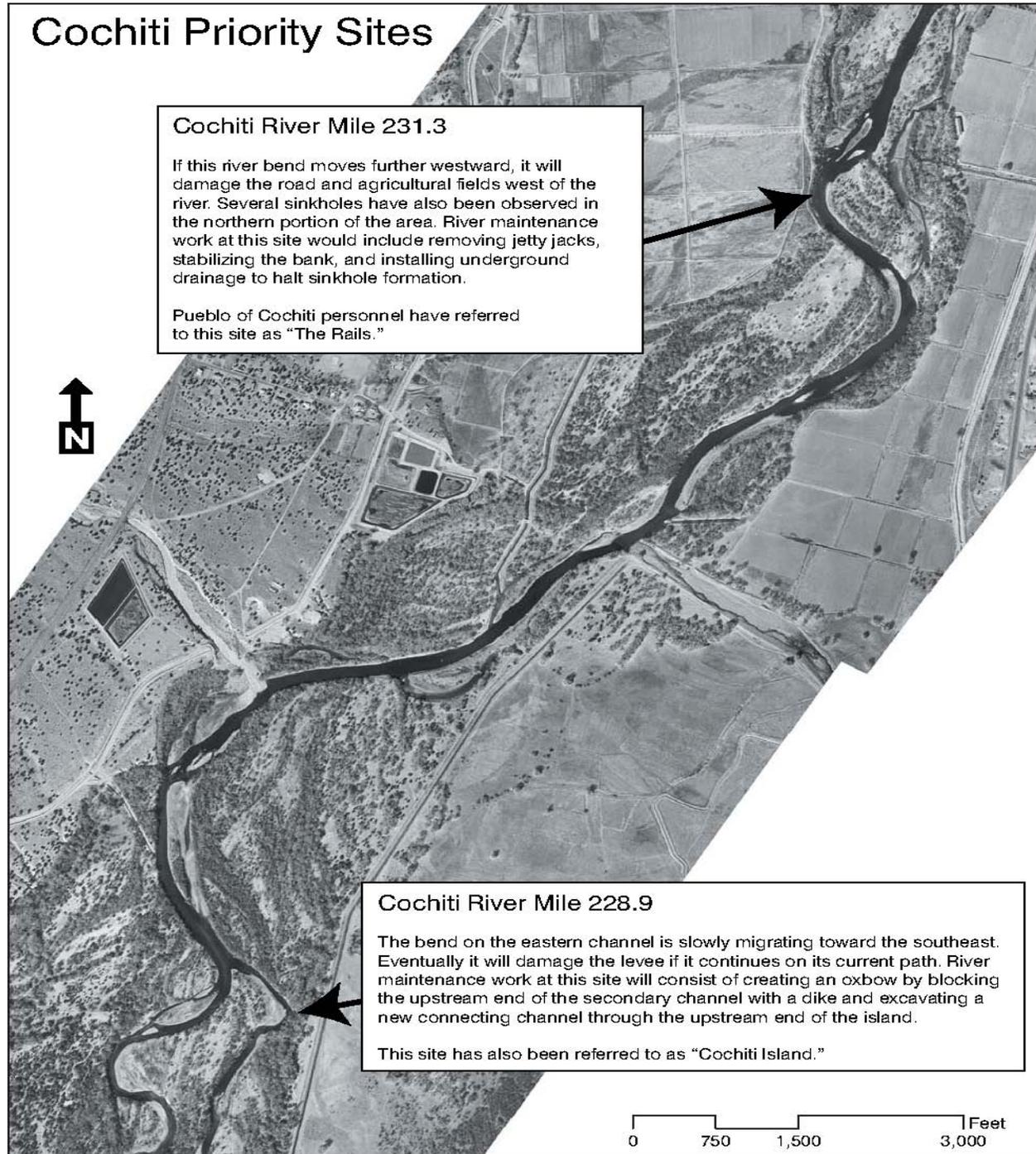


Figure 1. Locations of Cochiti priority sites

1.3. Need for the Action

The primary concern at River Mile 231.3 is on the west bank of the Rio Grande. The river is only about 30 feet away from a dirt road that runs parallel to the channel. The edge of an agricultural field is about 80 feet away from the channel; it is believed that this field may have an underground drainage system that could be damaged if the river migrates further westward. Additionally, several sinkholes, probably caused by flow of groundwater, have been observed between the river and the agricultural fields. Some sinkholes have formed in the road, and sinkholes near the channel have the potential to encourage erosion of the bankline.

At River Mile 228.9, the main concern is that the bend in the secondary channel could migrate toward the levee, causing a levee breach and possible flow of river water into the adjacent drain. The bend in the secondary channel has an unusually small radius of curvature, and there is evidence that the secondary channel could abruptly become the main channel because of its steeper gradient, as compared to the western channel (Bio-West, Inc., 2005c). The distance from the channel to the levee toe is about 200 feet.

1.4. Purpose of the Action

In order to fulfill the need (described in section 1.3) for the action, Reclamation proposes to strengthen the west bank at Priority Site 231.3. At Priority Site 228.9, Reclamation proposes to protect the east levee from eastward migration of the River. The following are objectives of the proposed action:

- 1.4.1. At River Mile 231.3, the proposed action would be to remove the jetty jacks, install bio-engineered bank protection, and move the nearby road farther away from the river.
- 1.4.2. At River Mile 228.9, the proposed action would be to block the upstream end of the secondary channel with a berm and excavate a new channel through the island that will connect the main channel to the secondary channel downstream of the priority site.
- 1.4.3. Both objectives above must meet the habitat needs specified in the Biological Opinion addressing Reclamation's river maintenance activities (U.S. Fish and Wildlife Service, 2003).

1.5. Relevant Statutes, Regulations, and other Plans

The proposed action would be required to conform to the provisions of following regulations and associated federal and state agencies:

- 1.5.1. Section 7 of the Endangered Species Act (ESA) administered by the U.S. Fish and Wildlife Service (Service).
- 1.5.2. Section 106 of the National Historic Preservation Act (NHPA) administered by the New Mexico State Historic Preservation Officer (SHPO).
- 1.5.3. Section 401 Certification of the Clean Water Act (CWA) administered by the New Mexico Environment Department Surface Water Quality Bureau (NMEDSWQB).
- 1.5.4. Section 404 of the CWA administered by the Corps of Engineers.
- 1.5.5. Section 402 of the CWA administered by the Environmental Protection Agency (EPA).

- 1.5.6. Cochiti Priority Sites Biological Assessment dated April 2007, prepared by the Albuquerque Area Office Environment Division Staff.

1.6. Issues, Public Scoping

Public scoping, for the purpose of defining the issues regarding the implementation of the proposed action, was limited to the following:

- 1.6.1. Two technical meetings were held with the Pueblo to discuss various alternatives. One of the meetings was with the Service and the Corps of Engineers to discuss CWA issues and ESA issues.
- 1.6.2. Three informal field trips with the Pueblo's environmental manager to discuss the scope of work and to understand any issues the pueblo might have regarding the proposed action.
- 1.6.3. One government to government consultation with the Pueblo's governor to understand any issues the Pueblo may have regarding the proposed action.

The following are a list of issues that have been identified:

- 1.6.3.1. Effects of the project on the Silvery Minnow, Bald Eagle, and the Southwestern Willow Flycatcher.
- 1.6.3.2. The potential introduction of State-listed noxious weeds.
- 1.6.3.3. Erosion-related water quality impacts during construction and after construction.
- 1.6.3.4. Avoidance of cultural and archaeological resources, as well as potential sacred sites in the project area.
- 1.6.3.5. Avoidance of Indian Trust Assets (ITAs)
- 1.6.3.6. The potential for any adverse effects to low-income and minority populations.
- 1.6.3.7. Air quality and noise from construction activities
- 1.6.3.8. Native vegetation

Chapter 2 ALTERNATIVES

2.1. Introduction

This chapter will be devoted to describing and comparing the alternatives including a summary of environmental consequences. The chapter has four sections as follows:

- 2.1.1. Description of Alternatives
- 2.1.2. Process Used to Consider, Select, and Eliminate Alternatives
- 2.1.3. Discussion of Proposed Alternative
- 2.1.4. Summary Comparison of the Activities, the Predicted Achievement of the Project Objectives, and the Predicted Environmental Effects of All Alternatives (see page 21).

2.2. Description of Alternatives

- 2.2.1. Description of the No Action Alternative