

CHAPTER 1—INTRODUCTION

Need for and Purpose of Action

This Final Environmental Assessment (EA) discusses alternatives for providing endangered fish passage at the Price-Stubb Diversion Dam on the Colorado River in Mesa County, Colorado. It was prepared by the U.S. Bureau of Reclamation (Reclamation) in cooperation with the U.S. Fish and Wildlife Service (Service) to comply with the National Environmental Policy Act (NEPA), Endangered Species Act, and related U.S. Department of the Interior policies and regulations. If, based on this analysis, Reclamation concludes the selected action would have no significant impact on the human environment; preparation of an Environmental Impact Statement would not be required before the action could be implemented.

A Draft EA for the Price-Stubb Diversion Dam fish passage was distributed for public comment in April 1999 (Reclamation, 1999). A Supplemental Draft EA was distributed for public comment in July 2002 (Reclamation, 2002a). A Revised Supplemental Draft EA was distributed in April 2004, which provided additional evaluation and refinement of the alternatives analyzed in the Supplemental Draft EA.



Figure 1—Price-Stubb Diversion Dam on the Colorado River near Palisade, Colorado

The 8-foot high Price-Stubb Diversion Dam (see Figure 1) is owned by the Palisade Irrigation District and Mesa County Irrigation District. They completed construction of the dam in 1911 to divert irrigation water. In 1919, the dam was no longer used following completion of Reclamation's Grand Valley Project Diversion Dam and the Government Highline Canal.

Since 1987, Federal and State agencies, water users and environmental interests have been cooperating in the Upper Colorado River Endangered Fish Recovery Program (Recovery Program). The goal of the Recovery Program is to establish self-sustaining populations of four endangered fish species in the Upper Colorado River Basin while allowing for continued use and future development of Colorado River water supplies. The Recovery Program has developed a basin-wide action plan that includes restoring fish passage.

Access to upstream habitat of these migratory fish species has been blocked by three irrigation diversion dams on the Colorado River (see Frontispiece Map):

- 1) the Grand Valley Irrigation Company (GVIC) Diversion Dam, about 3 miles downstream of the Price-Stubb Diversion Dam;
- 2) The Price-Stubb Diversion Dam (discussed in this Draft EA); and
- 3) The Grand Valley Project Diversion Dam, about 5.3 miles upstream of the Price-Stubb Diversion Dam.

In March 1998, a notch was completed in the GVIC Diversion Dam and a fish passageway was constructed below it. The passageway consists of rocks placed in the Colorado River channel to form a series of riffles and pools. In 2004, fish passage was restored at the Grand Valley Project Diversion Dam. Fish passage consists of a constructed concrete ladder through the dam. This Final EA references information from the Final EA's for passage at the GVIC and the Grand Valley Project Diversion Dams (Reclamation, 1997; Reclamation, 2002b). Both EAs discussed the need for fish passages to help restore populations of the razorback sucker (*Xyrauchen texanus*) and the Colorado pikeminnow (*Ptychocheilus lucius*).

Construction of a fish passage at the Price-Stubb Diversion Dam is planned for 2005. Providing fish passage at these three dams will provide endangered fish access to approximately 50 miles of critical habitat upstream of the Grand Valley Project Diversion Dam.

Need: Action is needed to restore fish passage at the Price-Stubb Diversion Dam to meet the agreed upon schedule of the basin-wide Recovery Program and make sufficient progress toward recovering the endangered fish.

Purpose: Purposes of the Price-Stubb Fish Passage are to further the goals and progress of the Recovery Program.

- Actions taken should be cost effective, timely, and complement related actions to help restore native fish populations and protect existing and planned rights and uses affected by the project. Related Recovery Program actions include stocking endangered fish, controlling nonnative fish species, acquiring and restoring floodplain habitat, and protecting instream flows.
- Actions taken should protect potentially affected uses of Colorado River water including: providing municipal, domestic and irrigation water to residents of the Grand Valley; hydroelectric power development at the dam site; and river recreation. Actions taken should also protect use of the river canyon as a transportation corridor.
- The choice among alternatives should ensure costs to the Recovery Program are as low as possible while considering benefits to the endangered fishes.

Background Information

Endangered Fishes—Appendix A to the GVIC EA summarized information from many studies completed on the endangered fish, their habitat, their behavior, and factors that led to the decline and listing of the species under the Endangered Species Act. These studies have increased our understanding of actions needed to recover the fish (establish self-sustaining populations) throughout the Upper Colorado River Basin. Critical habitat has been designated for the Colorado pikeminnow and razorback sucker and includes the 100-year floodplain of the Colorado River from Lake Powell in Utah to Rifle, Colorado. The Colorado pikeminnow is now absent from its historic range in the river from the Price-Stubb Diversion Dam to Rifle, and razorback suckers are now extremely rare throughout the Upper Colorado River Basin. Providing upstream access past all three man-made diversion dams is needed to restore use of historical habitat to endangered fish species.

Habitat Availability Upstream—One factor that has led to the decline of native fish is loss of historic habitat. In 1997, the Colorado Division of Wildlife assessed the aquatic habitat available to endangered fish species in about 50 miles of river upstream from the three diversion dams (Palisade to Rifle). Runs (deep, moving water) and pools are excellent feeding and wintering areas for both Colorado pikeminnow and razorback sucker, and comprise 49 to 70 percent of the available habitat in various sections of the river. Seventy-six pools larger than 80 square-feet were documented in Anderson's fall survey (Anderson, 1997). Providing passage at the Price-Stubb Diversion Dam would open approximately 50 miles of suitable habitat upstream to help recover these endangered fishes.

FERC Hydropower License—In 1990, the Federal Energy Regulatory Commission (FERC) granted a license to develop a hydroelectric power generation project at the dam site (known as the Jacobson Hydro No. 1 Project). The project was put on hold in 1994, and has not been constructed. FERC amended the Jacobson Hydro No.1 license in September 2001 (FERC, 2001). The amendment included the means to reimburse the licensee for the cost of the fish passage. The maximum amount of the reimbursement was the anticipated cost of the least cost passage alternative. The license was terminated by FERC on July 15, 2002 (FERC 2002C). Reclamation’s implementation of fish passage at the Price-Stubb Dam was dependant on FERC’s decision on the amendment and/or the licensee’s decision to proceed with hydropower development. The licensee has not abandoned plans for hydropower development at the site.

Scope

Reclamation developed fish passage alternatives and identified issues or concerns with participation from many individuals, agencies, and organizations that may be affected by the project. Alternatives discussed in Chapter 2 are: **No Action, Conventional Fish Ladder, Downstream Rock Fish Passage, Downstream Rock Fish Passage with Whitewater Recreation Features, and Dam Removal.** The Final EA refines the Downstream Rock Fish Passage Alternatives that were evaluated in the Revised Supplemental Draft EA.

Water Resources

Ute Water Conservation District (Ute Water) Pump Plant Intake—Ute Water provides domestic water to over 60,000 Grand Valley residents via a pipeline from storage reservoirs. Their emergency backup water supply is pumped from the Colorado River out of the pool formed by the Price-Stubb Diversion Dam. Dewatering upstream of the dam or dam removal could adversely affect Ute Water’s ability to pump water from the river during low river flows.

Water Rights—Owners of existing water rights with points of diversion at the Price-Stubb Diversion Dam have raised issues regarding potential impacts and the future utilization of their water rights under the Dam Removal Alternative.

Clifton Water District-Downstream Water Quality—Changes in water quality downstream from the dam may affect the ability of Clifton Water to meet drinking water standards and provide domestic water to approximately 30,000 people.

Ute Water Pump Plant-Spring Flooding—The fish passage alternatives may affect spring flooding of the Ute Water pump plant.

Recreation Resources

River Boating—Historically, the dam has been a barrier to recreational boating. This fish passage project could affect future recreational boating along the Colorado River in the vicinity of the Price-Stubb Diversion Dam. The Final EA evaluates potential impacts associated with and without the incorporation of whitewater recreational features designed to enhance river recreation opportunities. Non-Recovery Program funds would be used to construct the whitewater features.

Public Safety—The dam poses a significant safety threat to all forms of water recreation in the vicinity of the dam.

Land and Facility Resources

Protect Existing Structures—The nearby Interstate 70, railroad, and Colorado River Siphon were designed and constructed with the dam in place. Evaluating the effects of the alternatives on the integrity and use of these structures is necessary.

Railroad and Landslide Stability— Union Pacific Railroad tracks run along the Colorado River past the Price-Stubb Diversion Dam. Fish passage alternatives could affect the stability of an existing landslide area and railroad. The landslide has previously caused damage to the tracks.

Ownership of Dam and Lands—Before any modification to the dam and site could be made, permission would be needed from the dam owners and adjacent land owners to access the site and/or use their land and facilities.

Unique Geographic Features

Floodplain and Wetland Protection—The Colorado River provides highly valued riparian habitat and floodplain functions that need to be considered as fish passage is restored.

Fish and Wildlife Resources

Effects on Endangered Colorado River Fishes—Providing passage at the dam is needed to allow endangered fish access to upstream habitat (see background information on page 3). Passage actions should complement other Recovery Program efforts such as stocking endangered fish, controlling competition or predation by nonnative fish, and restoring habitat.

Cultural Resource

Protect Historic Dam—The Price-Stubb Diversion Dam is eligible for listing on the National Register of Historic Places, and Federal agencies are responsible for ensuring that their actions do not adversely affect the historic qualities of the dam.

Social and Economic Resources

Hydropower—The Price-Stubb Diversion Dam could be used to generate hydroelectric power. Fish passage alternatives may reduce potential power generation, and dam removal would preclude hydropower development.

Costs and Benefits—Some people question using taxpayer’s money to provide passage for endangered fish.