CHAPTER 1 – INTRODUCTION

PROPOSED ACTION

The Upper Colorado River Endangered Fish Recovery Program (Recovery Program) is proposing to construct a fish screen in the Redlands Power Canal southwest of the city of Grand Junction, in Mesa County, Colorado (Frontispiece Map). The Redlands Power Canal transports water diverted from the Gunnison River by the Redlands Diversion Dam. The fish screen would return fish that enter the Redlands Power Canal to the Gunnison River downstream of the Redlands Diversion Dam. The Recovery Program would provide for construction, operations and maintenance of the fish screen. The Bureau of Reclamation would construct the fish screen on behalf of the Recovery Program, and the Recovery Program would provide funding to Redlands Water and Power Company (RWPC) for long-term operations and maintenance of the fish screen. RWCP would also assume ownership of the Redlands Fish Ladder and fish and receiving funding for the Recovery Program for maintenance of the fish ladder.

NEED FOR AND PURPOSE OF ACTION

This final environmental assessment (EA) evaluates the effects on the human environment from constructing and operating a fish screen in the Redlands Power Canal. The Bureau of Reclamation (Reclamation) prepared this EA in cooperation with other federal and state agencies 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 proposed 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.

UPPER COLORADO RIVER ENDANGERED FISHES RECOVERY PROGRAM

In 1988, the Governors of Colorado, Utah and Wyoming; the Secretary of the Interior; and the Administrator of Western Area Power Administration entered into a cooperative agreement to initiate the Upper Colorado River Endangered Fish Recovery Program. The Recovery Program is an interagency partnership created to recover the endangered Colorado pikeminnow (*Ptychocheilus lucius*), razorback sucker (*Xyrauchen texanus*), humpback chub (*Gila cypha)* and bonytail (*Gila elegans*).

Recovery Program elements include:

- Habitat management including identifying and acquiring instream flows, changing

operations of Federal dams, and operating other reservoirs in a coordinated manner to benefit endangered fish.

- Habitat development including restoring floodplain/wetland habitats, constructing fish passageways around dams and other barriers in the river, and constructing fish screens in major canal diversions.
- Native fish propagation and genetic management involving establishing facilities to hold adult brood stock to prevent extinction of these rare fish and maintain their genetic resources; develop growout ponds; conduct research to improve survival of endangered fish raised in captivity and stocked in the wild; and support appropriate stocking and reintroduction efforts.
- Nonnative species and sportfishing entailing managing detrimental nonnative fish species in habitat considered "critical" to endangered fish. This also involves educating and distributing information to anglers to reduce accidental capture of endangered fish.
- Research, monitoring, and data management provides information about what these fish need to survive, grow, and reproduce in the wild. Efforts include compiling data on the number, sizes, and locations of endangered fish; monitoring endangered fish population trends; and making river flow recommendations.

Need: The Recovery Program identified a need to construct and operate a fish screen in the Redlands Power Canal to prevent entrainment of adult and sub adult Colorado pikeminnow and razorback sucker.

Purpose: The purpose of the proposed action is to implement Recovery Program elements to minimize incidental take of endangered fishes, enhance critical endangered fish habitat and assist in recovery of the Colorado pikeminnow and razorback sucker.

● 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 providing fish passage at diversion dams and structures, stocking endangered fish, controlling non-native fish species, acquiring and restoring floodplain habitat, and protecting instream flows.

● Potentially affected uses of Gunnison River water include: providing irrigation water to residents of the Redlands Community, hydroelectric power generation at the Redlands Power Plant, and the Redlands fish passageway.

● 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—Many studies have been completed on Colorado River endangered fishes (Colorado pikeminnow, razorback sucker, bonytail and humpback chub), their habitats, their behavior, and factors that led to the decline and listing of these species under the Endangered Species Act (summarized in the Final EA for Fish Passage at the GVIC Diversion Dam, Appendix A, (Reclamation, 1997). These studies have increased the understanding of actions needed to recover the fish (establish self-sustaining populations) throughout the Upper Colorado River Basin. Critical habitat (critical to the survival of a listed species) has been designated for the Colorado pikeminnow and razorback sucker, and includes the 100-year flood plain of Gunnison River from its confluence with Colorado River upstream to the Gunnison River's confluence with the Uncompahgre River.

Colorado pikeminnow and razorback sucker have been stocked in the Gunnison River upstream of the Redlands Diversion Dam and have been documented using the Redlands Fish Passageway (Burdick 2002). Both species have also been stocked upstream and downstream of the Gunnison River's confluence with the Colorado River (River Mile 170.3) (Burdick, 2002b). Both fish species are extremely rare throughout the Upper Colorado River Basin. To exclude fish from major canal diversions, a fish screen was constructed in 2002 in the Grand Valley Irrigation Canal, a diversion from the Colorado River at River Mile 185.1. A fish screen will also be constructed 2004 in the Government Highline Canal, which is a diversion from the Colorado River at River Mile 193.6. Additional information on endangered Colorado River fishes is included in the biological assessment (USBR, 2003A).

Habitat Availability Upstream—One factor that has led to the decline of native and endangered fish is loss of access to their historic habitats (USFWS, 1991; USFWS 1998). In 1996, fish passage was restored past the Redlands Diversion Dam to allow endangered fish access to critical habitat in the Gunnison River to its confluence with the Uncompahgre River and restored connection with Colorado River endangered fish populations. This fish passageway is operated by the Service as a selective passage and prevents non-native fish movements upstream of the Redlands Diversion Dam.

PUBLIC SCOPING

A public scoping letter was mailed to various agencies and adjoining landowners in April 2003. Reclamation requested assistance in identifying issues and concerns associated with the proposed projects. Reclamation requested comments by May 19, 2003. No comments were received.

A draft EA was mailed and distributed to interested parties for public review and comment on October 7, 2003. Reclamation requested that written comments be received by November 7,

2003 and received two written comment letters regarding the draft EA. Comment letters and responses are presented in Chapter 4.

Fish screen alternatives evaluated in this EA include the Proposed Action and No action Alternatives. The alternatives are discussed in Chapter 2. Reclamation identified the following potential issues and concerns described below which are discussed in greater detail in Chapter 3.

Water Resources

Diversion Dam Operations and Water Rights—The Redlands Diversion Dam is used year-round to divert water for irrigation and to generate hydroelectric power. Operation of the fish screen should not interfere with operations of the dam or affect the ability to divert water for irrigation and hydroelectric power generation.

Water Quality—During construction of the fish screen, water quality downstream of the fish return pipeline could be temporarily affected.

Land and Facilities Resources

Protecting Existing Structures—Water is diverted year-round from the Gunnison River via the Redlands Diversion Dam in to the Redlands Power Canal. An improperly functioning screen (screen that restricts canal flow) could damage the canal and negatively affect Redland Water and Power Company's operations.

Access—Before construction of the fish screen, Reclamation would coordinate activities as needed with the Redlands Water and Power Company to safely access the site and use their land and facilities. Reclamation would request temporary easements for construction. After construction, Redlands Water and Power Company would assume ownership and operate the fish screen with funding provided by the Recovery Program.

Unique Geographic Features

Floodplain and Wetlands Protections—The Gunnison River provides highly valued riparian habitat and floodplain functions that need to be considered when constructing the fish screen.

Fish and Wildlife Resources

Effects on Endangered Colorado River Fishes—Federal actions that affect (either adverse or beneficial) federally threatened or endangered species require consultation with the U.S. Fish and Wildlife Service under Section 7 of the Endangered Species Act of 1973. The Service concludes consultation with written concurrence with the Biological Assessment or

issuance of a Biological Opinion. Harm, injury or death to a listed species or their designated critical habitat as a result of the proposed action would constitute a "takings" and requires an "incidental take statement" to comply with the Endangered Species Act.

Cultural Resources

Historic Resource Preservation—The Redlands Diversion Dam, canal system, and power plant are included in the Redlands Dam Complex (5ME764) and is considered eligible for the National Register of Historic Places by the Colorado Historical Society. Federal agencies are responsible for ensuring that they take into account the effects of their actions on significant cultural resources, and comply with the National Historic Preservation Act, 36 CFR Part 800, and other historic preservation requirements.

Social and Economic Resources

Hydropower—The Redlands Diversion Dam diverts winter flows from the Gunnison River for hydropower generation at the Redlands Power Plant. Operation of the fish screen should not interefere with the ability to divert and transport water to the Redlands Power Plant. However, during construction diversion for hydropower generation would be temporarily interrupted.