

RECLAMATION

Managing Water in the West

Price-Stubb Fish Passage

FINAL ENVIRONMENTAL ASSESSMENT

***Providing Endangered Fish Passage at the Price-Stubb
Diversion Dam on the Colorado River***

December 2004



**U.S. BUREAU OF RECLAMATION
WESTERN COLORADO AREA OFFICE
GRAND JUNCTION, COLORADO**

Price-Stubb Diversion Dam Vicinity Map

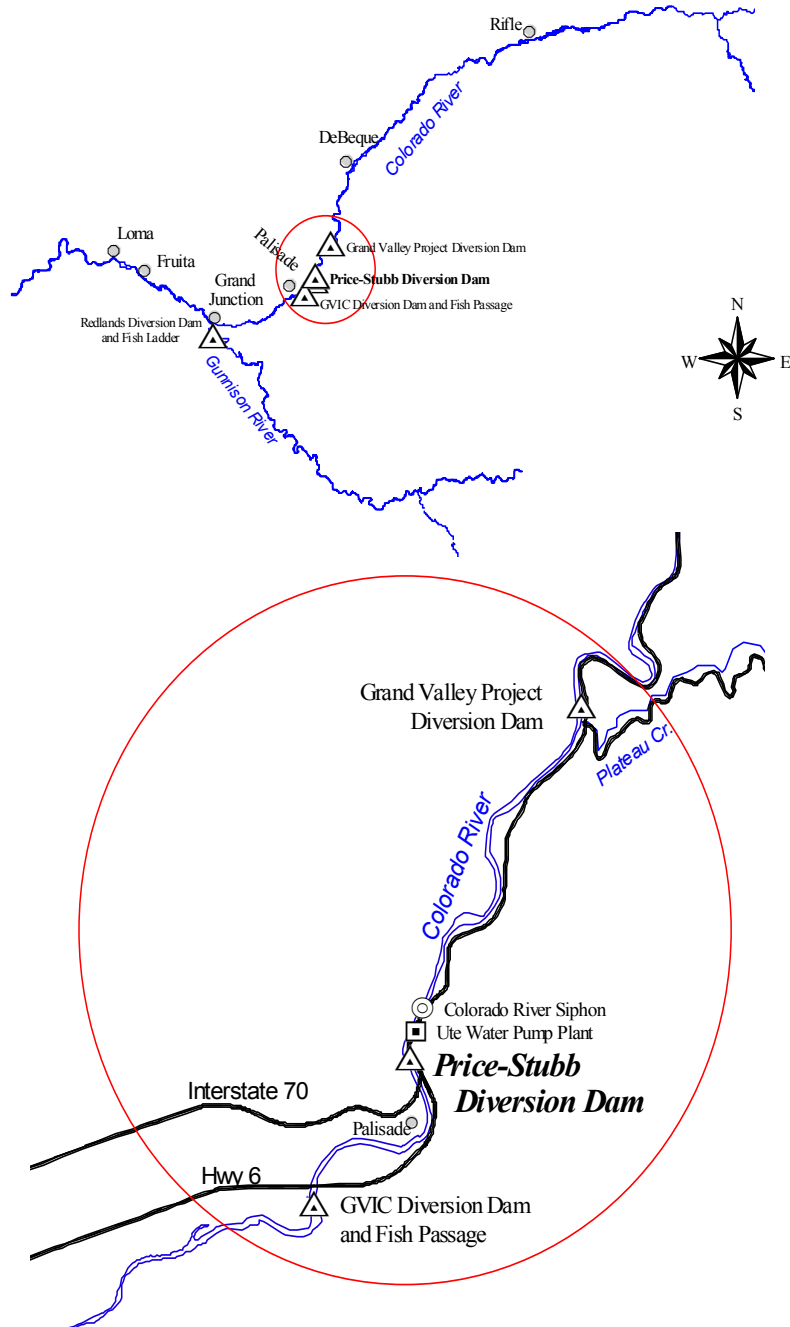


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CHAPTER 1—INTRODUCTION

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.

CHAPTER 2—ALTERNATIVES

This chapter describes the **No Action** alternative and alternatives for providing fish passage at the existing Price-Stubb Diversion Dam. Four alternatives for fish passage are given detailed consideration: 1) constructing a **Conventional Fish Ladder**, 2) constructing a **Downstream Rock Fish Passage**, 3) constructing a **Downstream Rock Fish Passage with Whitewater Recreation Features**, and 4) **Dam Removal**.

No Action

Under the No Action alternative, Reclamation would not take action to restore endangered fish passage at the Price-Stubb Diversion Dam. The dam would remain in place and continue to be a barrier to upstream passage for endangered fish species.

The No Action alternative assumes development and operation of the Jacobson Hydro No. 1 Project, as licensed on September 13, 2001, would not occur (FERC, 2001). This 40-year license was originally issued to E.R. Jacobson for the construction, operation, and maintenance of the project by FERC on June 19, 1990 (FERC, 1990).

In 1994, FERC granted a ‘stay’ on development of the hydropower project for several reasons. These included the need to reinitiate consultation with the Service on the effects of the project on the newly listed razorback sucker and recently designated critical habitat upstream from the project. On June 27, 1996, the licensee filed an application for amendment of the license. Major provisions of the amendment included moving the hydro plant upstream to the toe of the dam and decreasing the hydro plant flow from 2,000 cubic feet per second (cfs) to 1,000 cfs.

FERC (2002a) issued a letter dated January 4, 2002 to E.R. Jacobson that stated since deadlines had passed to commence project construction; Mr. Jacobson should refrain from any land-disturbing or land-clearing activities at the project site. On June 3, 2002, FERC (2002b) issued a notice, pursuant to Section 375.308(f) of the Commissions regulations, of probable termination of the license for Jacobson Hydro No. 1 Project after 30 days from the date of the letter. An order terminating the license was issued by FERC (2002c) on July 15, 2002. Additional details about the Jacobson Hydro No. 1 Project are included in the 1999 Draft EA (Reclamation, 1999). E.R. Jacobson has not abandoned plans for hydropower development at the site.

Conventional Fish Ladder

Under this alternative, Reclamation would construct a concrete ladder around the dam, similar to the U-shaped ladder (see Figure 2) constructed in 1996 at the Redlands

Diversion Dam on the Gunnison River (Reclamation, 1995). Fish passage use by Colorado pikeminnow and razorback sucker has been documented at the Redlands Fish Ladder by the Service. This alternative would be compatible with private development of the Jacobson Hydro No. 1 Project, as licensed in the 2001 FERC License Amendment (FERC, 2001) if constructed simultaneously. However, this license was terminated by FERC (2002c) in July 2002.

If independently constructed, it could complicate construction of both the hydropower plant and fish ladder. For instance, if the fish passage is constructed first, it would need to incorporate attraction flows. If the fish passage and hydropower plant were



Figure 2—Redlands Conventional Fish Ladder on the Gunnison River, Colorado

constructed simultaneously, attraction flows could be incorporated into the hydropower plant. Also if fish passage were constructed first, it would present site constraints on hydropower plant construction. The Biology Committee of the Recovery Program does not support two conventional fish ladders in close proximity due to biological concerns.

Design

The fish ladder would be built on the right bank of the river on the E.R. Jacobson Property. Conceptual designs for the development of the site show the ladder on the same side of the river as the power plant intake of the proposed Jacobson Hydro No. 1 Project (see Figure 3). The ladder would consist of a 200 to 300 foot-long concrete channel, 6 feet in width, and 8 to 10 feet deep similar to the fish passage constructed at the Redlands Diversion Dam (Figure 2). About 25 cfs of river flow would be diverted

into the channel for the ladder. The upstream entrance to the channel would have a trash rack to prevent debris from entering the fish ladder. Baffles (vertically placed plates) would divide the ladder into a series of small pools; fish would swim from pool to pool through openings in each baffle. The baffles would be placed at appropriate intervals to keep flows at velocities that native fish can swim against. The site would be fenced with a 6 foot-high fence for facility and public safety. An existing access road adjacent to the

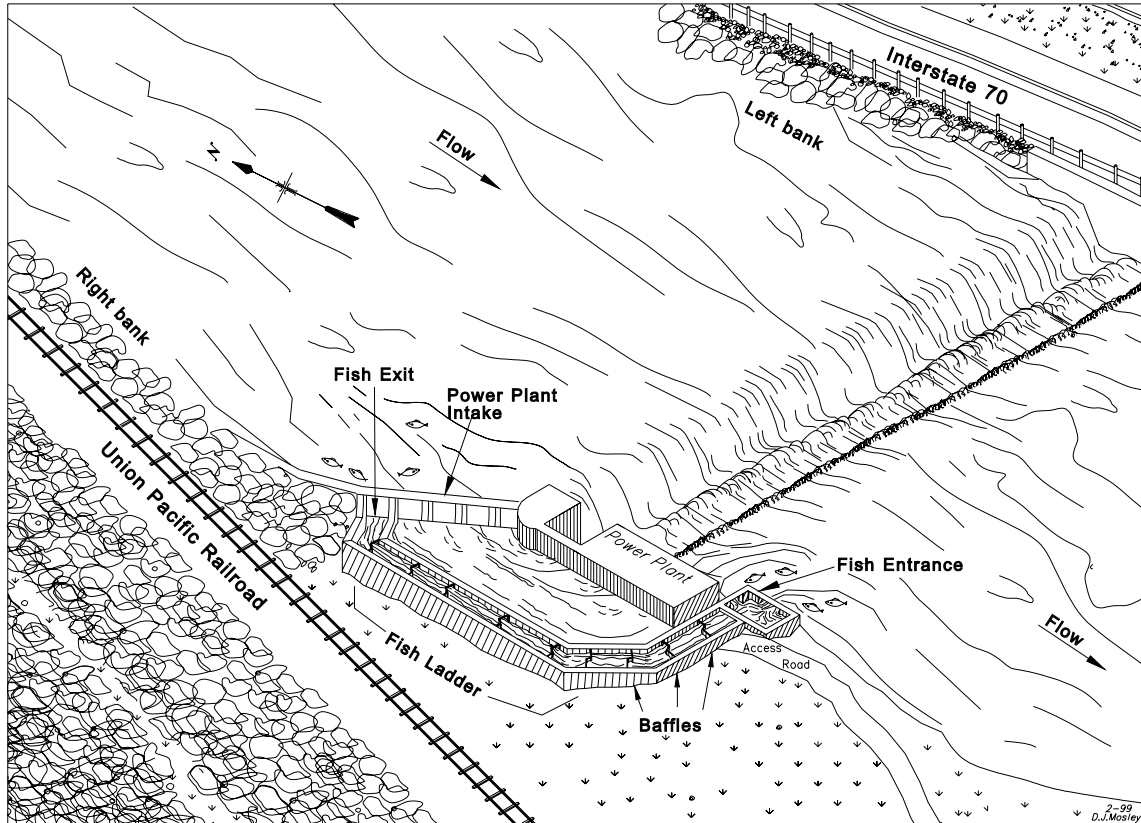


Figure 3-Conceptual Design for Conventional Fish Ladder¹

Union Pacific Railroad and E.R. Jacobson properties would be used along the right-bank of the river to provide construction and maintenance access.

A fish trap to control upstream movement of nonnative fish was also considered in the preliminary designs for the fish ladder. However, factors such as cost, site limitations, and land ownership at the dam site may make it infeasible to include a fish trap at this location. A fish trap was constructed at the Grand Valley Project Fish Passage located about 5.3 miles upstream of the Price-Stubbs Diversion Dam to prevent upstream movements of nonnative fish above the Grand Valley Project Diversion Dam.

Reclamation also examined constructing a conventional fish ladder on the river-left bank of the Price-Stubbs Diversion Dam but determine the design to be cost prohibitive.

¹ Hydro plant is not included in the proposed action and is shown for illustration purposes only.

Limited space between the dam and Interstate 70 and the lack of access for maintenance also made the design infeasible.

Construction

The fish ladder would be completed under a construction contract. Before the fish ladder could be constructed, Reclamation would coordinate the design, easements and access with the dam and adjoining land owners. Temporary construction easements or permits would also be acquired from all affected land owners before construction. Reclamation would negotiate protective measures to reduce impacts to private property, rights-of-ways and facilities. Following construction, any damaged area would be restored, as near as practicable, to its original condition. Access to the dam for construction would be from an existing road paralleling the Colorado River along the right riverbank from the Interstate 70 Bridge to the Price-Stubb Diversion Dam through property owned by Union Pacific Railroad and E.R. Jacobson. Construction staging and material storage would be on adjacent vacant land owned by E.R. Jacobson. Construction access is limited near the dam because of its proximity to the railroad tracks and Interstate 70.

A cofferdam would be used to direct the river around the construction area and river flows would not be reduced. Before construction, Reclamation and the contractor would obtain necessary approvals required by the Clean Water Act. Reclamation would request Section 404 authorization under Regional General Permit No. 057 for projects that benefit recovery of endangered fishes. If discharging water for construction dewatering is needed, the contractor would obtain a Section 402 permit. Reclamation would also coordinate construction activities within the 100-year floodplain with Mesa County. Construction would be scheduled during low river conditions in the fall and winter of 2005—2006.

Reclamation recently constructed a similar passage at the Grand Valley Project Diversion Dam and estimates the construction costs of this alternative to be about \$4,300,000.

Operation, Maintenance and Replacement Measures

The Service would operate the fish ladder from April through October of each year. They would monitor native and endangered fish use of the ladder.

An agreement among Palisade and Mesa County Irrigation Districts, the Service, and the Recovery Program would define operation and maintenance, and replacement responsibilities. Construction would not begin until operation, maintenance, and replacement funding mechanisms were agreed upon and the agreements signed. Permission would also be obtained from all affected land owners for perpetual access and use of the site for operation and maintenance. Long-term operation and maintenance costs are estimated to be \$15,000—\$25,000 per year. The Recovery Program or the Service would fund all activities for the fish ladder, with no costs to local water users.

Water Supply for Fish Ladder

Because of downstream senior water rights, a flow of at least 520 cfs is present in this reach of the river under all but the most severe drought conditions. The Service also has up to 37,650 acre-feet of storage water available from upstream reservoirs for endangered fish uses in drought years. About 25 cfs of Colorado River flow would be needed to operate the fish ladder. An additional 75 cfs would be used to provide attraction flows necessary to direct fish to the fish ladder entrance. If the Jacobson Hydro No. 1 Project were independently constructed, the power plant's tailrace could also provide the necessary attraction flow.

Downstream Rock Fish Passage

This alternative was developed in response to public comments on the 1999 Draft EA with input from affected parties. The Downstream Rock Fish Passage Alternative would notch the Price-Stubbs Diversion Dam and leave the Dam in place. A rock ramp fish passage would be constructed on river left² of the downstream face of the dam. This type of fish passage would not prevent construction of the Jacobson Hydro No. 1 Project; however, the proposed hydro project would require additional modification and design. Significant modifications include elimination of the 4-foot flashboards on the dam and moving the hydro plant downstream or extending the hydro plant discharge to the downstream entrance of the fish passage.

Similar rock fish passages were constructed in the San Juan River by the San Juan River Basin Recovery Implementation Program to restore endangered fish passage. An "in-river" rock fish passage was constructed in 2002 at the Hogback Diversion Dam on the San Juan River in near Shiprock, New Mexico (Figure 4). An "out-of-channel" rock fish passage with selective fish passage (fish trap) was constructed in 2003 at the Public Service Company of New Mexico Diversion Dam on the San Juan River near Fruitland, New Mexico (Figure 5). Fish passage use by Colorado pikeminnow and razorback sucker has been documented at the Public Service Company of New Mexico fish passage.

Design

Conceptual designs (Figure 6) propose placing fill material on the downstream face of the Price-Stubbs Diversion Dam to create fish passage. The fish passage would consist of 1) a 30 foot-wide by 550 foot-long downstream fish passage channel with a 2.5 percent gradient along the river-left bank of the Colorado River, 2) a 80 cfs low flow fish passage notch in the Price-Stubbs Diversion Dam, 3) the remaining 250-foot-width of the dam would be stabilized with riprap material to create a 2.5% sloped ramp, 4) a divider-berm constructed between the fish passage channel and the 2.5% ramp to protect the fish passage, and 5) a rock barrier or sheet pile barrier to assist in directing fish to the passage

² River left refers to the left side of the river as viewed when looking downstream.

entrance. In discussions with CDOT, a 33 foot offset of the fish passage channel was established to allow for future widening of Interstate 70. Stop-log channels were added to the fish passage notch to address Ute Waters concerns about maintaining service during extreme low river conditions if their main pipeline was out of service.

Reclamation would construct this alternative if any of the following conditions are not met. Conditions include: 1) a local governmental entity securing non-recovery program funding for the incremental costs associated with construction of the Downstream Rock Fish Passage with Whitewater Features Alternative, 2) obtain the necessary permits and easements from underlying land owners (Palisade and Mesa County Irrigation Districts, E.R. Jacobson, Union Pacific Railroad, and CDOT), and 3) a local governmental entity to sponsor and assume liability and maintenance responsibility for the whitewater features. This alternative includes only the existing public access to the diversion dam via access to the Colorado River from Colorado River State Park-Island Acres.



Figure 4-Hogback Diversion Dam Rock Fish Passage on the San Juan River, New Mexico

Construction

The rock fish passage structure would be completed under a construction contract. Before fish passage could be constructed, authorization for modification of the dam would be obtained from the owners of the dam, Palisade and Mesa County Irrigation Districts. Temporary construction easements, permanent easements and intergovernmental agreements would also be acquired from all affected land owners before construction. Reclamation would negotiate protective measures to reduce impacts

to private and State properties, rights-of-ways, and facilities. Following construction, any damaged area would be restored, as near as practicable, to its original condition. Temporary construction access to the dam would be from an existing trail that lies within the railroad right-of-way that parallels the railroad tracks and through E.R. Jacobson property downstream of the dam. Construction staging and material storage would be on adjacent vacant land owned by Eric Jacobson.



Figure 5—Public Service Company of New Mexico Diversion Dam Rock Fish Passage on the San Juan River, New Mexico

Construction access and staging areas are limited near the dam because of its proximity to the railroad tracks. However, because the fish passage would be located in the river channel and not between the dam, head gates and railroad; construction access would be less constricted when compared to the conventional fish ladder alternative.

A cofferdam and/or bypass channel may be used to direct the river around the construction area and river flows would not be reduced. Before construction, Reclamation and the contractor would obtain necessary approvals required by the Clean Water Act. Reclamation would request Section 404 authorization under Regional General Permit No. 057 for projects that benefit recovery of endangered fishes. If discharging water for construction dewatering is needed, the contractor would obtain a Section 402 permit. Reclamation would also coordinate construction activities within the 100-year floodplain with Mesa County. Construction would be scheduled during low river conditions in 2005.

The estimated construction cost for this alternative is approximately \$4,800,000. Costs for operations and maintenance for this alternative would be negligible. Recovery Program cost for this alternative would be comparable to the Downstream Rock Fish Passage with Whitewater Features Alternative.

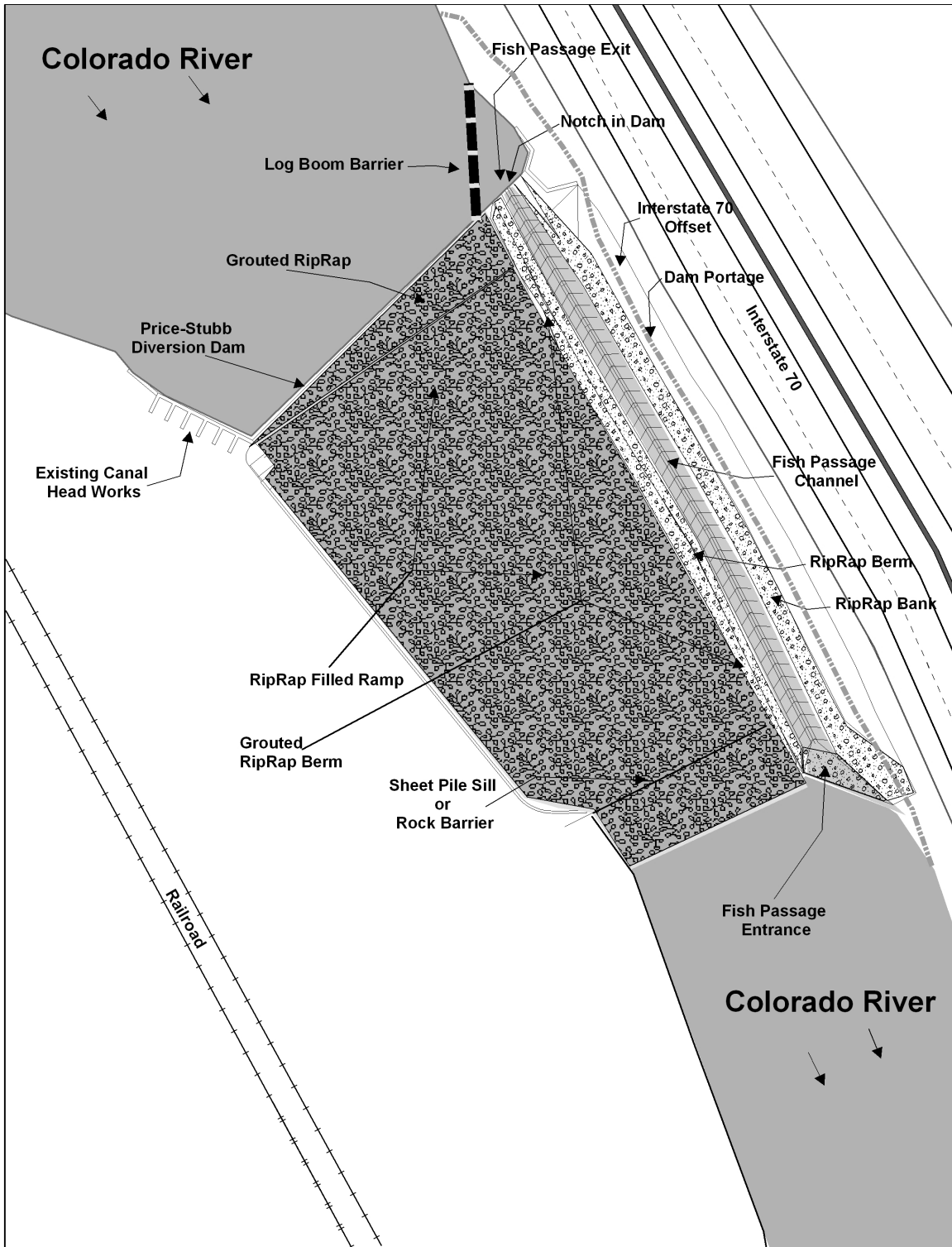


Figure 6- Downstream Rock Fish Passage Conceptual Drawing

Operation, Maintenance and Replacement Measures

The downstream rock passage would require no regularly scheduled actions related to operation and maintenance, other than inspection. Reclamation would enter into a contract with Palisade and Mesa County Irrigation Districts to provide inspection and maintenance as needed. Temporary maintenance access for maintenance and repairs would be requested from the Union Pacific Railroad and E.R. Jacobson on an as-needed basis.

Water Supply for Fish Passage

Because of downstream senior water rights, a flow of at least 520 cfs is present in this reach of the river under all but the most severe drought conditions. The Service also has up to 37,650 acre-feet of storage water available from upstream reservoirs for endangered fish uses in drought years. About 80 cfs of Colorado River flow would be needed to operate the fish ladder. The fish passage notch would be designed to direct the first 80 cfs in the river to the fish passage channel. Additional flows would begin to spill over the rest of the dam at higher flows until the dam is completely submerged. If built, the Service would require the Jacobson Hydro No. 1 Project to discharge near the fish passage entrance to serve as an attraction flow using pipe across the river, or defuse the discharge at various locations. Without the Jacobson Hydro No. 1 Project, flows over the rock ramp would be directed towards the fish passage entrance to attract fish. Attraction flows would vary, dependant on flows in the river.

Downstream Rock Fish Passage

With Whitewater Recreation Features

This alternative was developed through various meetings with representatives of the Western Association to Enjoy Rivers (WATER), CDOT and the Town of Palisade. The alternative requires that the following conditions be met before construction could proceed. These conditions include: 1) a local governmental entity securing non-recovery program funding for the incremental costs associated with construction of the Downstream Rock Fish Passage with Whitewater Features Alternative, 2) obtaining necessary permits from underlying land owners (Palisade and Mesa County Irrigation Districts, E.R. Jacobson, and CDOT), 3) the Town of Palisade sponsoring and assume liability and maintenance responsibility for the whitewater features, and 4) the Town of Palisade obtaining public access below the dam from the Union Pacific Railroad and E.R. Jacobson. The alternative would incorporate whitewater features into the Downstream Rock Fish Passage Alternative. The Town of Palisade submitted an application to Great Outdoors Colorado for additional funding to construct the whitewater features concurrent with construction of the fish passage. CDOT has conditioned its approval of this alternative, subject to the Town of Palisade acquiring the public access easements below the dam prior to approving construction of the whitewater features and Federal Highways Administration approval. Under this alternative, if any of the conditions identified above

are not met prior to construction, Reclamation would construct the Downstream Rock Fish Passage Alternative.

Recreational features include constructing a second notch in the Price-Stubb Diversion Dam for rafts and kayaks, and constructing a series of four rock weirs using grouted riprap to create desired whitewater conditions adjacent to the fish passage channel. The fish passage channel would be lengthened from 550 feet to 860 feet to create safer boating conditions for rafts and kayaks. Under this alternative, the Town of Palisade would obtain public access below the dam via an existing road through Union Pacific Railroad and E.R. Jacobson properties. A foot path from a parking area on the E.R. Jacobson property to the whitewater features would also be constructed. The public could also access the features from Colorado River State Park-Island Acres via the Colorado River. An emergency portage around the dam would also be developed. The Town of Palisade may pursue future recreation improvements within the E.R. Jacobson property (parking areas, restrooms, kiosk, trails, etc.) which are discussed in the cumulative impacts section of this document.

Design

This alternative proposes constructing three grouted riprap weirs downstream of the Price-Stubb Diversion Dam adjacent to the fish passage channel to create whitewater features (see Figure 7). The fish passage would consist of 1) a 860 foot-long fish passage channel with a 2.0 % gradient below the dam on the river-left bank of the Colorado River, 2) a 80 cfs low flow fish passage notch in the Price-Stubb Diversion Dam, 3) a second boater notch to provide for raft and kayak use, 4) three grouted riprap weir structures downstream of the Price-Stubb Diversion Dam, 5) an emergency portage around the diversion dam on river left, 6) a divider-berm between the fish passage channel and riprap weirs, and 7) a foot path to access the whitewater features on river-right below the dam. In discussions with CDOT, a 33 foot offset of the fish passage channel was established to allow for widening of Interstate 70. Additional visual screening along Interstate 70 may be required and funded with non-Recovery Program funds. Stop-log channels have been added to both the fish passage notch and the boater notch to address Ute Waters concerns about maintaining service during extreme low river conditions if their main pipeline was out of service.

Construction

This alternative would be completed under a construction contract. The Town of Palisade would secure non-Recovery Program funding for the additional construction costs associated with construction of the whitewater features (the second notch, additional riprap and grouting, potential visual screening along Interstate 70, etc.). Before the fish passage and whitewater features could be constructed, authorization for the dam modifications would be obtained from the owners of the dam. Temporary construction easements, permanent easements, and intergovernmental agreements would be acquired from Palisade and Mesa County Irrigation Districts, E.R. Jacobson, CDOT,

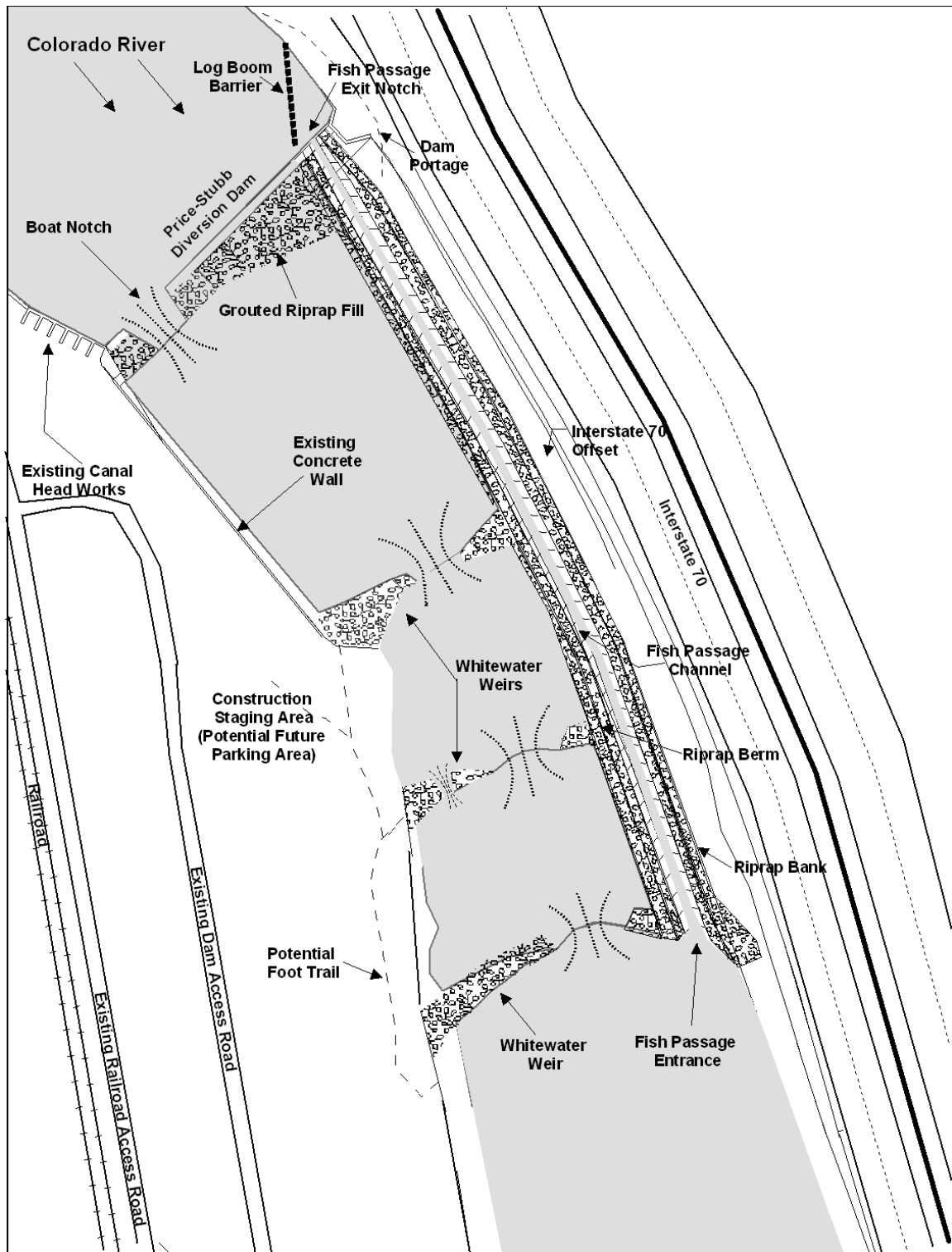


Figure 7-Downstream Rock Fish Passage with Whitewater Features Conceptual Drawing

and the Union Pacific Railroad for the fish passage. Reclamation would negotiate protective measures to reduce impacts to private and State property, rights-of-ways, and facilities.

Additional permits and easements associated with the whitewater features would be obtained by the Town of Palisade prior to construction. Following construction, any damaged area would be restored, as near as practicable, to its original condition. Access to the dam would be from the existing trail that parallels the railroad tracks within the Union Pacific Railroad's right-of-way and the E.R. Jacobson property. Reclamation would request temporary construction access to construct the fish passage and whitewater features and the Town of Palisade would obtain a permanent easement for public access through these properties to access the whitewater features. Construction staging and material storage would be on adjacent vacant lands owned by E.R. Jacobson.

A cofferdam and/or bypass channel may be used to direct the river around the construction area and river flows would not be reduced. Before construction, Reclamation and the contractor would obtain necessary approvals required by the Clean Water Act. Reclamation would request Section 404 authorization for the fish passage under Regional General Permit No. 057 for projects that benefit recovery of endangered fishes. A separated Section 404 authorization may be needed for construction of the whitewater features. If discharging water for construction dewatering is needed, the contractor would obtain a Section 402 permit. Reclamation would also coordinate construction activities within the 100-year floodplain with Mesa County. Construction would be scheduled during low river conditions in the fall of 2005.

Reclamation estimates that the construction costs for this alternative would be the about \$5,400,000. The incremental costs associated with the construction of this alternative would be funded with Non-Recovery Program funds (i.e. Great Outdoors Colorado, W.A.T.E.R). The Town of Palisade and recreational interests have been working with a private consultant to design the whitewater features and refine cost estimates. It is estimated that the additional construction costs of the Downstream Rock Fish Passage with Whitewater Features Alternative when compared to the Downstream Rock Fish Passage Alternative are between \$400,000 to \$600,000. Operation and maintenance costs for this alternative would be negligible.

Operation, Maintenance and Replacement Measures

This alternative would require no regularly scheduled actions related to operation and maintenance of the fish passage, other than inspection. Reclamation would enter into a contract with Palisade and Mesa County Irrigation Districts to provide inspection and maintenance as needed. The Town of Palisade would provide maintenance, as needed, for the whitewater features including but not limited to onsite management, enforcement, and repairing whitewater features after large river flow events if needed.

Water Supply for Fish Passage

Because of downstream senior water rights, a flow of at least 520 cfs is present in this reach of the river under all but the most severe drought conditions. The Service also has up to 37,650 acre-feet of storage water available from upstream reservoirs for endangered fish uses in drought years. About 80 cfs of Colorado River flow would be needed to operate the fish ladder. The fish passage notch would be designed to direct the first 80 cfs in the river to the fish passage channel. Additional flows would begin to flow through the boater notch and then over the rest of the dam at higher flows until the dam is completely submerged. Flows over the whitewater weirs would be directed towards the fish passage entrance to attract fish. If built, the Service would require the Jacobson Hydro No. 1 Project ensure delivery of attraction flow for the fish passage entrance. Without the Jacobson Hydro No. 1 Project, attraction flows would vary, dependant on flows in the river. The Town of Palisade, W.A.T.E.R. and E.R. Jacobson have discussed entering into an agreement to insure water availability for recreation on weekends and holidays if the Jacobson Hydro No. 1 Project is built.

Dam Removal

This alternative would involve partial removal of the dam to restore natural fish passage in the river channel. This alternative would not be compatible with hydropower development. Before Reclamation could remove the dam, four outstanding issues (discussed in Chapter 3) would have to be resolved:

- 1) Develop mitigation measures to resolve the Ute Water pump plant issue
- 2) Determine whether a hydropower plant would be developed at the dam site
- 3) Obtain permission for dam removal from owners of the dam. The Mesa County Irrigation District expressed support for dam removal, but the Palisade Irrigation District is currently opposed to dam removal.
- 4) Geologic investigations indicate landslide stability is an issue; however, no impacts to the slide movement caused by dam removal are anticipated. If the dam is removed and a landslide were to occur, potential for damage liability exists.

Design

The Dam Removal Alternative would allow the foundation, abutments, and canal head works to remain in place (see Figure 8). The left abutment³ of the dam may provide some erosion protection for Interstate 70. The right abutment may protect the Union Pacific's railroad tracks from erosion. The portion of the dam below the riverbed does not present a barrier to fish and leaving it in place would help reduce scouring of the riverbed.

³ The left abutment is on the left side of the dam, as viewed when looking downstream.

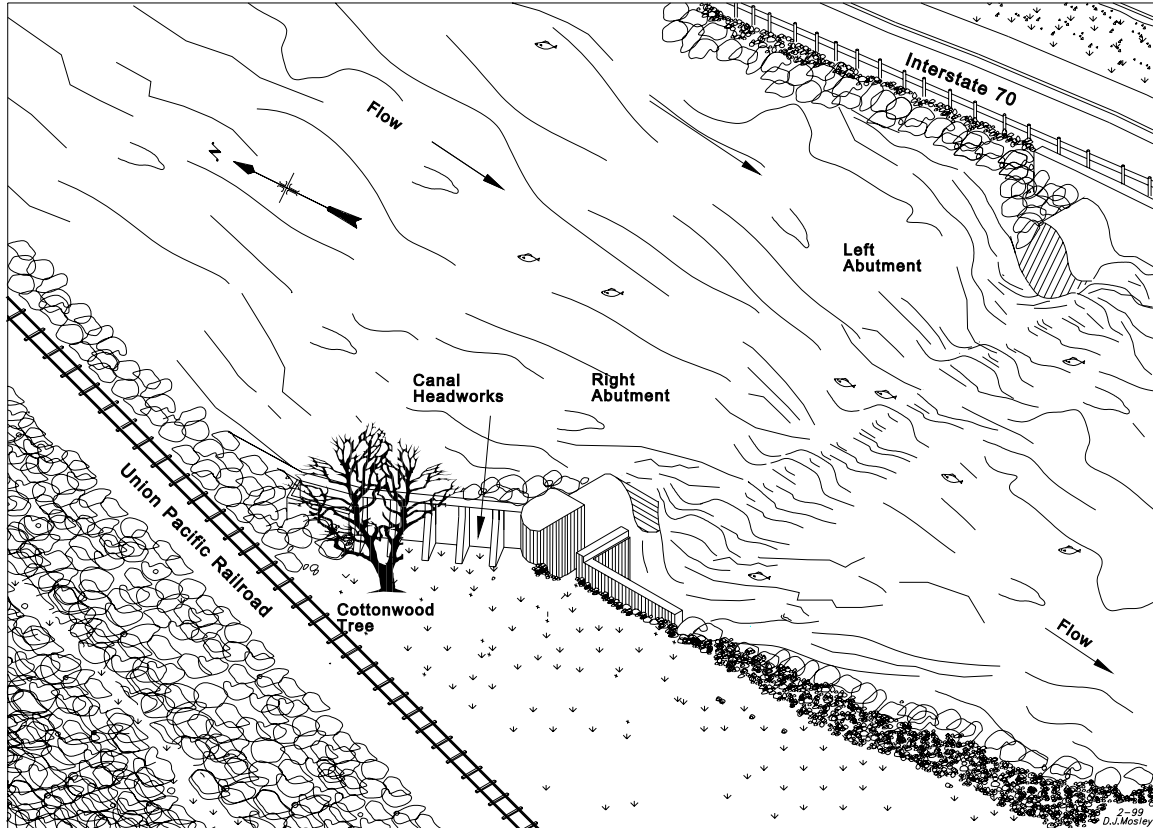


Figure 8-Dam Removal Conceptual Design Drawing

Removal activities would require measures, such as placement of boulders or riprap in the riverbed or along the banks, to restore or enhance natural fish passage in the river channel by native and endangered fish.

Boating safety would also be considered in removal designs (addition of boulders or riprap to protect boaters from the dam abutments, and removal of hazards such as rebar protruding from the remaining concrete). To the extent that costs to the Recovery Program would not increase and create liability issues, designs for removal could also consider incorporating measures to enhance recreational boating.

Measures would also be required to protect the ability of Ute Water to deliver Colorado River water to their treatment plant. These possible options include;

1. Deliver Colorado River water to the Ute Water pump plant via the Orchard Mesa Power Canal⁴. Water would be available year round, except for about 2 to 3 weeks in the spring and fall during maintenance of the power canal and Grand Valley Power Plant.

Reclamation estimates this option would cost from \$150,000 to \$300,000. This option would require the following measures:

⁴ The Grand Valley Project is not authorized to carry municipal and industrial (M&I) water. Only Congress can authorize the carrying of M&I water through the Grand Valley Project Canals.

- a) Secure a firm supply of water
- b) Agreement among Ute Water, Orchard Mesa Irrigation District (OMID), Grand Valley Water Users Association (GVWUA), and Reclamation to deliver water to the Ute Water pump plant.
- c) Execute a ‘power interference’ agreement among the Recovery Program, Reclamation, OMID, GVWUA, and Xcel Energy to compensate for lost power revenues. Ute Water would divert about 15 cfs from the 800 cfs Orchard Mesa Power Canal, which would decrease the ability to deliver water to the Grand Valley Power Plant.
- d) Execute a crossing agreement with CDOT for a pipeline through the Rapid Creek culvert under Interstate 70.

2. Lower the sump (submerged pump) in the Ute Water pump plant. Reclamation estimates this option would cost about \$600,000, and would require the following:

- a) Extend the foundation of the pump plant down 6 feet.
- b) Extend the intake structure and trash rack down 6 feet.
- c) Extend the discharge piping
- d) Modify or replace pumps to allow for pumping from a lower elevation

3. Modify the river channel to assure an adequate water surface elevation during low flow conditions. Reclamation estimates the cost of this option at about \$1,000,000 (due to the lack of construction access and the magnitude of Colorado River flows). This option would involve constructing a low head dam immediately downstream from the Ute Water pump plant. The dam crest would be about 100 feet-long, and the dam foundation would extend down into the riverbed. The dam design would permit upstream fish passage in a manner similar to the riffle-pool design used at the GVIC Diversion Dam.

Other options for protecting the Ute Water pump plant intake were to costly too consider further; 1) acquire alternate water sources, possibly from the Rapid Creek drainage; and 2) construct a new pump plant at a different location.

Construction

Removal of the Price-Stubb Diversion Dam would be completed under a construction contract. Approval of the owners of the dam would be required. Temporary construction easements or permits would also be required before construction. Reclamation would negotiate protective measures to reduce impacts to private property, rights-of-ways, and facilities. Following construction, any damaged area would be restored, as near as practicable, to its original condition. Access to the dam would be from Old Highway 6 along a trail that lies within the railroad right-of-way and the E.R. Jacobson property. Construction staging and material storage would be on adjacent vacant land owned by E.R. Jacobson. Construction access is limited near the dam because of its proximity to the railroad tracks and Interstate 70.

A cofferdam and or bypass channel may be used to direct the river around the construction area and river flows would not be reduced. Before construction, Reclamation and the contractor would obtain necessary approvals required by the Clean Water Act. Reclamation would request Section 404 authorization for the fish passage under Regional General Permit No. 057 for projects that benefit recovery of endangered fishes. A separate Section 404 authorization would likely be needed for construction of the whitewater features. If discharging water for construction dewatering is needed, the contractor would obtain a Section 402 permit. Reclamation would also coordinate construction activities within the 100-year floodplain with Mesa County. Construction would be scheduled during low river conditions in the fall of 2005.

Reclamation estimates the total costs for dam removal to be between \$1,900,000 and \$2,900,000 depending on mitigation measures selected for impacts to the Ute Water pump plant. The cost includes all preconstruction activities, permitting, construction, construction administration, and mitigation measures.

Operation and Maintenance

If the dam is removed to restore natural fish passage, no regularly scheduled actions related to operation and maintenance is anticipated. The passage would operate as a natural river channel, so maintenance would be minimal.

Water Supply

Because of downstream senior water rights, a flow of at least 520 cfs is present in this reach of the river under all but the most severe drought conditions. The Service also has up to 37,650 acre-feet of upstream reservoir storage water available for endangered fish uses in drought years. Therefore, no measures would be needed to augment existing water supplies to enable fish to swim upstream after dam removal.

Selection of Recommended Alternative

Reclamation has selected the **Downstream Rock Fish Passage with Whitewater Recreational Features Alternative** as its recommended alternative contingent on securing permits and easements from affected land owners, available non-Recovery Program funding for the whitewater features, local governmental sponsorship to assume liability, maintenance, and obtain public access for the whitewater features. Reclamation and the Recovery Program believe this alternative would best meet project purposes while protecting existing upstream uses and providing desired public safety and recreation. The alternative also minimizes the need for fish passage operation and maintenance.

Construction access is limited near the Price-Stubb Diversion Dam and head works. The dam is constricted by the Union Pacific Railroad on river-right⁵ and Interstate 70 on river-left. The Conventional Fish Passage alternative is compatible with the Jacobson Hydro No.1 Project. However, if constructed independently, access for construction of the Jacobson Hydro No. 1 Project would be severely limited. The dam would continue to be a hazard to river recreation and the general public. In addition, having two concurrent concrete fish ladders (Price-Stubb and Grand Valley Project Diversion Dams) within a short reach of the river would likely be less beneficial to endangered fish. Therefore, Reclamation has not selected the Conventional Fish Ladder alternative as its preferred alternative.

The Dam Removal alternative would be most beneficial to endangered fish and river recreation, but would adversely affect upstream water rights and hydropower, and may affect existing facilities (Ute Water Pumping Plant, railroad, Interstate 70 and Colorado River Siphon). Therefore, Reclamation has not selected the Dam Removal alternative as its preferred alternative.

The Downstream Rock Fish Passage alternative provides benefit to endangered fish while protecting existing water rights, existing facilities, and hydropower potential. The Downstream Rock Fish Passage alternative addresses public safety issues associated with the dam and improves conditions for river recreation, but the dam would continue to be impassible to watercraft. A portage around the dam and 2.5 rock ramp would help reduce the dangers associated with the dam.

Environmental Commitments

The fish passage alternatives include measures as needed to:

- protect the ability of Ute Water to pump from the Colorado River,
- protect Interstate 70 and the railroad bed from erosion,
- ensure ease of fish movement,
- mitigate impacts to the historic qualities of the Price-Stubb Diversion Dam,
- address public safety issues associated with the Price-Stubb Diversion Dam, Interstate 70 and the Union Pacific Railroad,
- accommodate future hydropower development at the Price-Stubb Diversion Dam, and
- accommodate development of whitewater recreation features.

⁵ River-right refers to the right bank of the river as viewed when looking downstream.

The degree, to which proposed measures would alleviate concerns for potentially affected resources and interests, is discussed within the applicable section of the next chapter.

To comply with requirements of the Endangered Species Act and the National Historic Preservation Act, Reclamation consulted with the Service and the Colorado State Historic Preservation Office on the Preferred Alternative. Consultation results are discussed in the next chapter.

Reclamation and/or construction contractors would obtain approvals under the Clean Water Act before beginning work in the river. Permit conditions would also be environmental commitments for the fish passage action.

CHAPTER 3—AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

General

This chapter discusses resources that may be affected by actions taken to provide fish passage at the Price-Stubb Diversion Dam. During preparation of the Final EA, issues and concerns were received from affected water users; resource agencies, private interests, recreational interest groups and citizens, and other parties (see Chapter 4, Consultation and Coordination, for further details).

For each resource, the potentially affected area and/or interests are identified. For significant issues, existing conditions are described, and impacts expected under the No Action alternative and each passage alternative is discussed. Impacts under the fish passage alternatives are usually similar for most resources. Where there are differences, the alternatives are discussed separately. The chapter concludes with a summary comparison of the alternatives and a list of mitigation measures.

The project is in Mesa County, Colorado along the Colorado River. Mesa County has a population of approximately 120,000. Grand Junction, the largest city in the area, was founded in 1881. The Rio Grande Railroad extended into the area in 1882 and, soon afterward, major irrigation of the valley began. The Price-Stubb Diversion Dam was completed in 1911. It was used to divert irrigation water to lands in the east end of the valley until 1918, when Reclamation's Grand Valley Project Diversion Dam and the Government Highline Canal were constructed. Although agriculture remains important in the valley today, some light manufacturing and service industries influence the economy. Tourism is also a significant source of economic activity for the area. The project area is within a major transportation corridor, with the Union Pacific's railroad tracks along the right bank of the river and the Interstate 70 highway on the left bank.

The upstream extent of the area affected by the fish passage proposals, and other endangered fish recovery activities for the Upper Colorado River, is the Town of Rifle in Garfield County. Rifle has around 5,500 residents involved in agriculture, oil and gas development, and services. Streamflows and floodplain habitat of the river have been significantly altered by water diversions and uses, infringement by railroads, gravel operations, highways and bridges, and by the operations of upstream storage reservoirs, flood control dikes and channelization.

Water Resources

Ute Water Conservancy District Pump Plant Intake

Issue: Dam modification or removal could adversely affect Ute Water’s ability to pump water from the Colorado River.

Existing Conditions: Ute Water provides water to about 60,000 residents of the Grand Valley. Their primary water supply is transported via a pipeline from the Plateau Creek drainage off the Grand Mesa. Ute Water’s pump plant is located approximately 2,000 feet upstream of the dam and is normally used as an emergency backup water supply.

Pumping operations require a water surface elevation of about 4,722 feet in the river (Collins, 1999). The dam helps maintain the required water elevation for pumping operations, especially during low flow conditions. Ute Water has stated that any loss in water surface elevation would negatively affect their ability to operate the pumping plant.

Impacts

No Action: The No Action alternative would allow Ute Water to operate their pump plant as they have historically.

Conventional Fish Ladder: A control gate would be installed in the fish passage to address Ute Water’s concern and allow the fish passage to be closed to maintain historic water elevations for pumping if needed.

Downstream Rock Fish Passage: It is estimated that the downstream rock fish passage would result in less than a 2 inch reduction in water surface elevation under the most extreme low river flow conditions. To address Ute Water’s concerns, stop-log channels have been incorporated into the fish passage design to allow Ute Water to close the fish passage under low river flow conditions if needed to maintain historic water surface elevations for pumping.

Downstream Rock Fish Passage with Whitewater Recreation Features: Predicted similar to the Downstream Rock Fish Passage Alternative. Stop-log channels would be incorporated into a second notch for boats to also address Ute Water’s concerns. If the Jacobson Hydro No. 1 Plant were constructed in the future, an Obermeyer Gate could be installed in the boater notch to ensure deliveries to the hydro plant.

Dam Removal: As discussed above, the Ute Water pump plant requires a river elevation of at least 4,722 feet. With the dam removed, the river elevation would drop below 4,722 feet whenever the flow is less than 5,500 cfs. Review of historic flow data (average of monthly mean flows from 1933 through 1996) shows Colorado River flows

are usually below 5,500 cfs for 9 months each year, from August through April. Dam removal would negatively affect Ute Water's ability to pump water from their existing facility. Modification to the existing pump plant or a back-up water supply from other sources would be necessary to mitigate impacts to Ute Water.

Water Rights

Issue: Owners of existing water rights with decreed 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.

Existing Conditions: Three existing water rights cite the Price-Stubb Diversion Dam as their decreed point of diversion. The first of these is a 573 cfs water right for power generation with an appropriation⁵ date of October 1, 1889 and adjudication⁶ date of July 22, 1912. This right is owned by the Palisade Irrigation District (PID) and was used to operate hydraulic pumps to lift their irrigation water. The power right has not been used since 1918; since then, PID's water has been delivered through the Government Highline Canal. The Palisade Irrigation District has retained the right to use the power right to pump irrigation water if irrigation deliveries cannot be made through the Government Highline Canal.

The second right is a 2,100 cfs conditional water right⁷ for hydroelectric power generation with an appropriation date of December 20, 1980 and an adjudication date of December 31, 1983. This right is owned by Mr. Eric Jacobson and is associated with the proposed Jacobson Hydro No. 1 Project, which would use the Price-Stubb Diversion Dam to divert Colorado River flows to its hydropower plant. As discussed previously, it is assumed that the Hydro No. 1 Project would not be constructed because of the terminated FERC license.

The third right is a 120 cfs water right for domestic, municipal and industrial uses with an appropriation date of February 17, 1947 and adjudication date of July 25, 1959. Eighty cfs of this right is owned by the City of Grand Junction, 20 cfs by the Clifton Water District and 20 cfs by the Water Development Company. The decree for this right lists five alternate points of diversion, with the Price-Stubb Diversion Dam being one of the decreed points. Approximately 19 cfs of this right has been made absolute⁸. The right was perfected by pumping from the Colorado River at the Clifton Water District Treatment Plant approximately 6 miles downstream from the Price-Stubb Diversion Dam. No water has been diverted at the Price-Stubb Diversion Dam under this water right.

⁵ *Appropriation*: applying water to a beneficial use. Often used interchangeably with the term water right.

⁶ *Adjudication*: the judicial process through which existence of a water right is confirmed by court decree.

⁷ *Conditional water right*: an appropriation that has not yet been made *absolute* by the water court.

⁸ *Absolute*: In Colorado, a conditional water right owner must prove diligence in completing work necessary to apply the water to a beneficial use before the water court makes the water right absolute (also termed perfected).

Impacts

No Action: The No Action alternative would have no effect on existing water rights. The opportunity to use PID's power right to lift irrigation water if the Government Highline Canal was unable to make deliveries would continue. The probability of using the Price-Stubbs Diversion Dam to provide an emergency irrigation water supply is very remote. Pumping and conveyance facilities to support this use no longer exist, and it would require a substantial amount of time and money to reestablish them. Likewise, the opportunity to use the Price-Stubbs Diversion Dam as a forebay to pump domestic, municipal and industrial water would continue. However, the probability of using this water right at this location is remote, since the City of Grand Junction and the Clifton Water District do not have distribution systems in this area. In addition, FERC established a prescriptive easement for fish passage and providing fish passage as a condition of the Jacobson Hydro No. 1 Project license which has been terminated by FERC.

Conventional Fish Ladder: This alternative would have the same effect on water rights as the No Action Alternative. If constructed, only about 1,000 cfs of the 2,100 cfs water rights associated with the terminated Jacobson Hydro No. 1 Project would be available under the amended FERC license (FERC, 2001).

Downstream Rock Fish Passage: This alternative would have the same effect on water rights as the No Action Alternative.

Downstream Rock Fish Passage with Whitewater Recreation Features: Under this alternative, the Jacobson Hydro No. 1 Project and the Town of Palisade would enter into an agreement to ensure adequate flows over the dam for whitewater recreation. With or without the Jacobson Hydro No. 1 Project, the fish passage would receive the first 80 cfs of flow in the river, ensuring continual fish passage operations.

Dam Removal: The Dam Removal Alternative would preclude the PID from pursuing development of a backup irrigation system or hydropower facility at the dam. Consequently, PID opposes removal of the dam. As co-owners of the dam, PID could prohibit the dam removal alternative.

This alternative would also preclude using the dam as a forebay to pump domestic, municipal and industrial water. The owners of this right have said that this impact would not affect their ability to meet their existing and future needs. The option of constructing and operating the Jacobson Hydro No. 1 Project would be precluded by dam removal and would likely result in the abandonment of hydropower rights.

E.R. Jacobson and PID have both suggested using their decreed rights and facilities as a point of delivery for surplus water from the Green Mountain Reservoir Historic User Pool. This water is available in some years and under certain hydrologic conditions as part of the Orchard Mesa Check Settlement, with the objective of indirectly benefiting endangered fish habitat. However, Reclamation in 2001 completed a contract with the

cities of Grand Junction, Fruita, and the Town of Palisade to deliver water for municipal recreation uses that accomplishes the same objectives for the endangered fish.

Clifton Water District—Downstream Water Quality

Issue: Fish passage construction or dam removal could cause temporary water quality changes downstream. This could affect the ability of Clifton Water District to meet drinking water standards and protect public health.

Existing Conditions: The Clifton Water District provides domestic water to about 30,000 residents in the Grand Valley. Using the Colorado River as their source of water, Clifton Water District produces potable water that exceeds drinking water standards (Clifton Water District, 1997). The District's diversion is approximately 6 miles downstream from the Price-Stubb Diversion Dam.

For all construction alternatives, Reclamation would request Clean Water Act Section 404 authorization from the Army Corp of Engineers under Regional General Permit Number 57, Projects Beneficial to the Recovery of the Upper Colorado Endangered Fish Species. The permit covers Recovery Program activities including construction of fish ladders and fish screen, levee construction and removal, etc.). The State of Colorado provided Section 401 Water Quality Certification for the types of projects covered under Regional General Permit Number 57. General permit conditions are designed to protect water quality and Reclamation would comply with these conditions.

Impacts

No Action: Water quality would remain unchanged if no fish passage is constructed.

Conventional Fish Ladder: Fish ladder construction could cause a temporary increase in erosion and sediment, but impacts are expected to be minor. Construction would occur when the Colorado River is low and a temporary cofferdam would be used to divert water away from construction areas.

Downstream Rock Fish Passage: Temporary effects on water quality are predicted to be greater than the Conventional Fish Passage Alternative since more of the construction activities take place in the river channel. However, implementation of best management practices and construction during low river flows would minimize negative impacts. Temporary cofferdams would also assist in minimizing effect on water quality. Operation of the fish passage would have no effect on water quality.

Downstream Rock Fish Passage with Whitewater Recreation Features: Effects would be similar to the Downstream Rock Fish Passage Alternative.

Dam Removal: Removing the dam would result in sediment deposits being washed downstream. Sediments are deposited in the riverbed as river velocities slow down. The geometry of the river near the dam, the steepness of the river bottom, and the constriction caused by Interstate 70 and the railroad tracks keep the velocities higher than what is commonly found behind dams. Surveys of the river bottom upstream from the dam revealed a thin layer of sediments behind the dam, but due to the water velocities, most of the river bottom is composed of gravels and cobbles (Collins, 1999).

The manager of Clifton Water District has said the District's main concern is knowing what to expect and when. They need to know what sediments exist, their composition, volume, and when the sediments would reach their river diversion. Consequently, Reclamation and the U.S. Geological Survey conducted a sediment study in the area above the dam. To ensure that the study addressed Clifton Water District's concerns, the District reviewed the sediment study proposal. This identified volume and composition of the sediment (USGS, 2000). If dam removal was selected, additional sampling and monitoring may be necessary.

Ute Water Conservancy District Pump Plant—Spring Flooding

Issue: Effects of each alternative on spring flooding of Ute Water pumping plant.

Existing Conditions: The Ute Water pump plant historically flooded when river flows were high and the Colorado River exceeded elevation 4,732 feet. In recent years, Ute Water constructed a concrete retaining wall to an approximate elevation of 4,739.8 feet to protect the pump plant from flooding. The estimated 100-year to 500-year flood events at the dam are 44,500 cfs and 52,800 cfs, respectively (Norval, 1998). The highest recorded flow in this stretch of the Colorado River was 36,000 cfs in 1983. According to Ute Water, the river elevation at that flow was just below the top of their retaining wall in 1983 (elevation 4,738 feet). Ute Water placed sand bags on top of the wall as a precautionary measure, and subsequently has raised the wall to elevation 4739.8 feet.

Impacts

No Action: The No Action Alternative would allow Ute Water to operate their pump plant as they have historically.

Conventional Fish Ladder: The fish ladder would be designed so it would have no effect on flood flows in the Colorado River.

Downstream Rock Fish Passage: The fish passage would also be designed so it would have no effect on flood flows in the Colorado River.

Downstream Rock Fish Passage with Whitewater Recreation Features: Same as the Downstream Rock Fish Passage Alternative.

Dam Removal: With dam removal, the Colorado River elevations at the Ute Water pump plant would be lower at all flow conditions. Flood flow elevations at the pump plant would be reduced by about 1.5 feet by removing the dam. Dam removal would, therefore provide some additional protection from flooding. As discussed previously, Ute Water would not be able to pump water when river flows drop below elevation 4,722 feet and dam removal would negatively affect Ute Water’s ability to pump at other times of the year without implemented mitigation measures (see pages 18 and 19). Option 3, which involves construction of a low head dam immediately downstream from the pump plant, would change existing river elevations and would not provide any protection from flooding.

Recreation Resources

Issue: Effects on Colorado River boating in the Grand Valley vicinity.

Existing Conditions: The Colorado River provides recreation opportunities for a growing population with an increasing interest in whitewater boating. The 8 foot-high Price-Stubb Diversion Dam is an extremely dangerous barrier to river navigation, and boaters must currently trespass to portage around the dam. No established take-out sites are near the dam; an undeveloped access site exists about 0.6 miles downstream. The dam is at the lower end of DeBeque Canyon, which runs about 23 miles from the Town of DeBeque to the Town of Palisade. Through most of the canyon, the river is bordered by Interstate 70 on the left bank of the river, and the Union Pacific Railroad on the right bank of the river. A potential “put-in” site within the canyon is at Island Acres State Park, about 3 miles upstream of the Price-Stubb Diversion Dam (Figure 9); however, there currently is no established boat ramp or boat launch (telephone conversation with Colorado State Parks, 3/11/2004). Potential funding sources to construct a boat ramp/launch could be Great Outdoors Colorado and/or the Federal Aide in Sport Fish Restoration—Wallop-Breaux. Limited access and the navigation barriers of the GVIC, Price-Stubb, and Grand Valley Project Diversion Dams have made recreational boating impracticable in the DeBeque Canyon reach of the Colorado River (see Frontispiece Map). State Parks has expressed an interest in pursuing a boat ramp/launch at Colorado State Parks-Island Acres.

For a variety of reasons, there is less recreational boating on the Colorado River in DeBeque Canyon and within the Grand Valley when compared to Glenwood Canyon, Ruby Canyon, and Westwater Canyon areas. Glenwood and Westwater Canyons have superior river conditions for whitewater boating and are advertised by the commercial rafting industry. Ruby Canyon is very scenic and provides access to a Bureau of Land Management (BLM) Wilderness Study Area.

The Colorado River is primarily flat water (Class I), for about 25 miles from Island Acres State Park to Loma, Colorado. There are few Class II rapids in this section, depending on river flows (Table 1). Though recreational use data is not available for the Colorado River upstream of the GVIC Dam at Palisade; it is estimated at 300 to 400 float trips annually. In addition, little information is available regarding river use within the Grand

Valley; the BLM estimates about 2,000 users annually recreate on the Colorado River between Palisade and Loma.

For comparison purposes, the BLM’s estimates about 32,213 recreational boaters annually used Ruby Canyon in 2003, just downstream from Loma. The 25 mile-long Ruby Canyon is of Class I and Class II difficulty. Immediately downstream from Ruby Canyon, a total of 13,790 commercial and private boaters used Westwater Canyon in 1998. Whitewater boating in Westwater Canyon is controlled by a permit system administered by the BLM. Depending on flow conditions, the rapids in the 16 mile-long canyon rated at Class II, Class III, and Class IV (telephone conversation with BLM-Moab, UT, and Grand Junction, CO, 3/19/2004). Also for comparison, the commercial use figure for Glenwood Canyon was 43,146 in 1997. About 90 miles upstream from Palisade, Glenwood Canyon is popular for whitewater boating, with Class II and Class III rapids (telephone conversations with BLM, 2/17/99). During the peak tourist season, more than 100 commercial rafts put in each day, and the many access points provide a variety of take-outs along this 20 mile stretch of river (Wheat, 1983).

Table 1-River Difficulty Classes

Class I	Easy, Riffles and small waves.
Class II	Novice. Easy rapids with waves.
Class III	Intermediate. Large waves, obstacles.
Class IV	Advanced. Long, difficult rapids.
Class V	Expert. Nearly impossible to run.
—from the Internet web page of Colorado State Parks River Safety	

Despite the lack of whitewater boating opportunities in the Grand Valley area, it is likely that recreational boating use in the area could double in 5 years (telephone conversation with BLM-Grand Junction, 02/18/2004). Over the past several years, BLM has documented an annual increase in usage at Loma Point between 16% and 20%. River recreational use would be enhanced by many related activities planned by various entities in the Grand Valley. The Colorado Division of State Parks developed a riverfront park near Fruita, Colorado and the Colorado Riverfront Commission has ongoing efforts to improve the river corridor. In 2001, Reclamation entered into a contract with the Cities of Grand Junction, Fruita, and Town of Palisade to deliver water for municipal recreation uses that also benefit endangered fish.

The Western Association To Enjoy Rivers (W.A.T.E.R.) has become active in pursuing a whitewater park at the Price-Stubb Diversion Dam. The Town of Palisade submitted a Great Outdoors Colorado (GOCO) Grant application for funding to support development of whitewater features below the Price-Stubb Diversion Dam as described in the Downstream Rock Fish Passage with Whitewater Features Alternative (see page 16). W.A.T.E.R. and the Town of Palisade envision constructing a world class whitewater park below the Price-Stubb Diversion Dam. However, this is contingent on obtaining funding and access easements and permission from properties owned by the Union

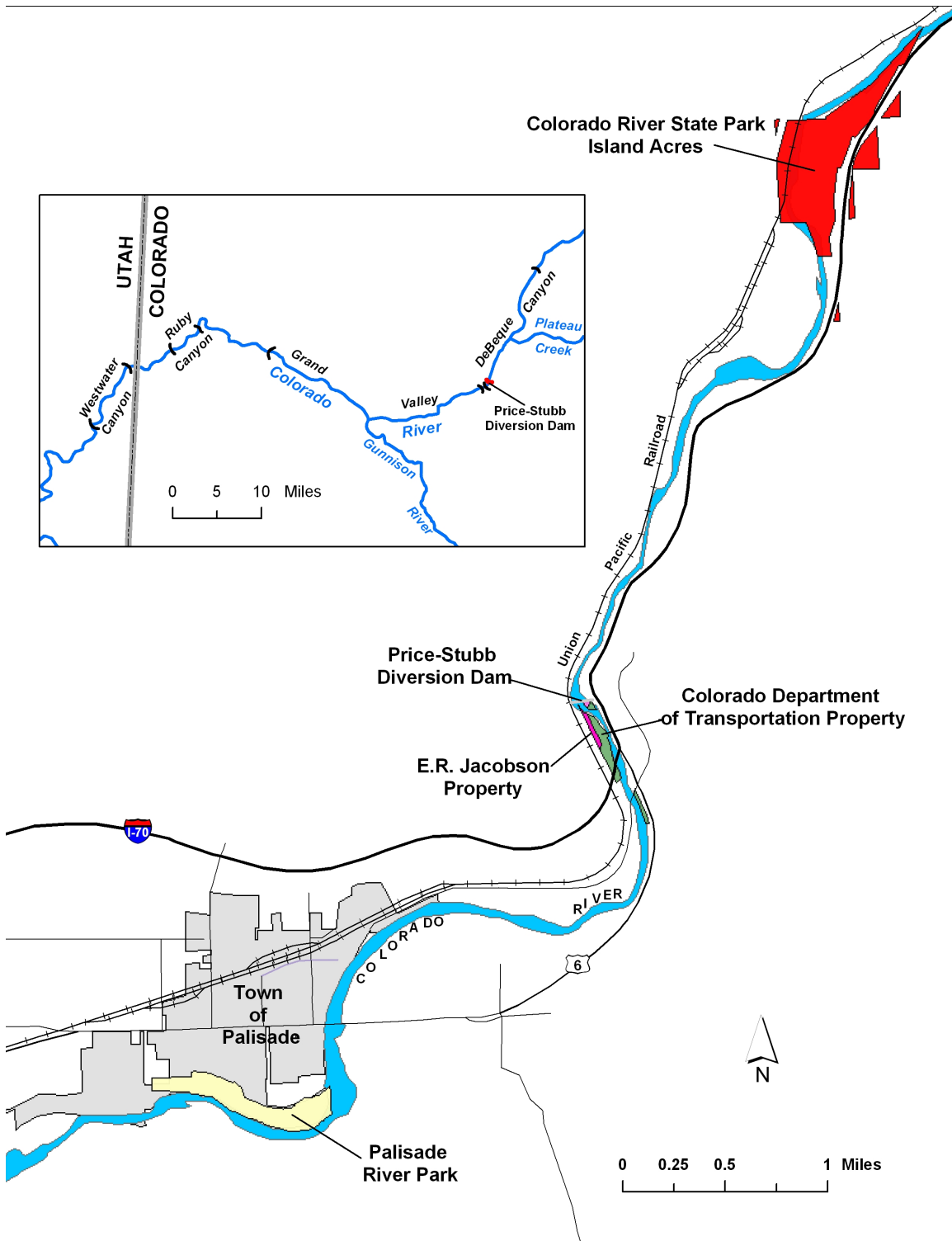


Figure 9-Potential Boating "Put-in" & "Take Out" Sites Near the Price Stubb Diversion Dam.

Pacific Railroad, E.R. Jacobson and CDOT. The whitewater features would include public access below the dam obtained by the Town of Palisade via an existing dirt road through the Union Pacific Railroad and E.R. Jacobson properties. The dirt road is accessed from North River Road (Old Highway 6). The features could also be accessed from Colorado River State Park-Island Acres upriver. Restrooms, kiosks, and other amenities may be constructed in the future with non-recovery program funds as funding becomes available. These additional recreation features are not included in any of Reclamation's alternatives and are discussed further in the cumulative impacts section of this chapter.

If non-Recovery Program funding were not available, or permits, easements and authorization not obtained; Reclamation would construct the 2.5 percent riprap ramp without whitewater features as described in the Downstream Rock Fish Passage Alternative (see Page 12).

Impacts

No Action: If no action is taken, the Price-Stubb Diversion Dam would remain a dangerous barrier to river navigation, and portaging around the dam would involve trespassing. River recreation would continue to increase, and local boating enthusiasts and BLM predict significant growth of river recreation and day use. Increased recreational boating is expected to occur whether or not any action is taken to provide fish passage at the Price-Stubb Diversion Dam. However, the opportunity to extend the river corridor upstream to Island Acres would be diminished. The river would not be a means to connect Colorado River State Park sites in the area and Colorado River State Parks-Island Acres would remain isolated from the other downstream parks.

Conventional Fish Ladder: As with the No Action alternative, construction of a fish ladder around the dam would provide no recreation benefit.

Downstream Rock Fish Passage: This alternative would provide an established portage around the diversion dam on river-left but would reduce the likelihood of additional recreation enhancements occurring in the future at the site. This alternative would address boating safety issues with warning signs posted upstream of the dam and install a log boom or similar-type barrier upstream of the fish passage exit to prevent boaters from attempting to float through the fish passage. The fish passage channel and riprap ramp would not be safe for boat passage and boaters, but the riprap ramp would be safer than the existing conditions. Boaters would be encouraged to portage around the dam. Unauthorized access to the river from Interstate 70 and the Cameo Bridge may occur, however it is not predicted to increase as a result of construction of the Downstream Rock Fish Passage Alternative.

Future recreational enhancements funded with non-Recovery Program funds could improve the remaining portion downstream of the dam as long as it did not interfere with the operation and structural integrity of the fish passage. However, future recreational enhancement would likely be cost prohibitive because of additional costs associated with

construction dewatering, mobilization, permitting, and economy of scale. Future enhancements would also require approval from the dam owners, underlying fee title land owners, and the Recovery Program.

Downstream Rock Fish Passage with Whitewater Recreation Features: This alternative would construct three grouted riprap weirs adjacent to a 860 foot fish passage channel for recreation enhancement. The weirs would create a series of pools and drops (whitewater features) at a gradient of 2.0 percent. The additional costs over and above the Downstream Rock Fish Passage Alternative would be funded with non-Recovery Program funds. This would enable the whitewater features to be constructed at a lower cost because the site would already be dewatered for fish passage construction, provide cost savings on volume of material purchased, and the potential to share contract administration and construction mobilization costs.

Recreational boating in this stretch of river would increase when compared to the Conventional Fish Ladder and Downstream Rock Fish Passage alternatives. Some trespass along Interstate 70 and at the Cameo Bridge to access the river above the Price-Stubbs Diversion Dam may also occur, but downstream public access to the whitewater features obtained by the Town of Palisade would make trespass incidents negligible. CDOT has made downstream public access a condition of granting permission to construct the whitewater features to minimize trespass along Interstate 70. In addition, an emergency portage on river-left would provide safe access around the dam.

The Town of Palisade and W.A.T.E.R. envision a world-class whitewater park using the whitewater features to host major events. This scale of recreation use could not be feasible without public access granted from Union Pacific Railroad and E.R. Jacobson. Access to the dam is controlled by the Union Pacific Railroad with a locked gate at the entrance to the access road. E.R. Jacobson owns a large portion of the right river bank below the dam and has been supportive of a whitewater park. He has discussed easements and/or land donations with the Town of Palisade. The Union Pacific Railroad identified concerns with public access through the existing railroad right-of-way. Concerns include maintaining access to the railroad for maintenance and repairs and increased liability associated with the public in close proximity of the railroad tracks. These concerns would need to be addressed by the Town of Palisade before the Union Pacific Railroad would consider granting the Town a public easement through the Railroad right-of-way.

Dam Removal: As stated in a January 1991 letter from Gary M. Lacy, P.E., removing the dam could create a naturally appearing, navigable segment of the river. This would open a spectacular canyon segment of the Colorado River to recreational...boating.” A possible put-in site is about 3 miles upstream at Colorado River State Park-Island Acres, from which boaters could float down the river to a variety of take-out points. Popular day use take-outs include Palisade; Colorado River State Parks-Corn Lake, Connected Lakes, Fruita; Blue Heron Lake, and Loma. Removal of the Price-Stubbs Dam would extend the 25 mile segment from Palisade to Loma by more than three miles.

Many letters received during the scoping process suggested the Recovery Program construct a whitewater park at the dam site. A December 1998 letter from the City of Grand Junction states “the City wishes to remain open on the issue of where a kayak or water park might be conceivable based on the...conceptual feasibility of such a park.” Kayakers and other recreational users of the Colorado River have been raising money to study the Price-Stubb Diversion Dam as a water park site. Funding for dam removal would be provided by the Recovery Program and does not include funds specifically for recreation enhancement. However, to the extent that costs to the Recovery Program would not increase, designs for removal could also incorporate measures to enhance recreational boating.

In conjunction with dam removal, one of the mitigation measure options for protecting the ability of Ute Water to pump from the Colorado River (see Page 19) would be implemented. Option 1 and 2 would have no effect on recreation. However, designs for option 3, which involves constructing a low head dam immediately downstream from the pump plant, would also consider a boating passage.

Public Safety

Issue: The dam poses a significant safety threat to all forms of water recreation in the vicinity of the dam.

Existing Conditions: The Price-Stubb Diversion Dam is an extremely hazardous structure. A January 1999 letter from Mesa County Irrigation District describes the Price-Stubb Diversion Dam as “...a deadly hazard to people who climb on or slide down the dam and to boaters who unwittingly go over the dam.” Drowning fatalities at the dam site were confirmed by several sources, but no statistics were available (conversations with Town of Palisade, Mesa County Health Department Vital Statistics, Mesa County Sheriff, and the Emergency Medical Services Coordinator for Saint Mary’s Hospital). A January 1999 letter from a WATER board member reports the Price-Stubb Diversion Dam is listed as one of the state’s top ten safety “hotspots”.

Impacts

No Action: The safety hazard would not change. As river recreation grows, more accidents at this dam would be likely. A warning sign is posted upstream of the Price-Stubb Diversion Dam, but due to the restricted access, the narrow river, and corresponding faster river velocities, the dam poses a significant risk to boaters, especially those who may not be familiar with the hazard.

Conventional Fish Ladder: As described in the No Action, constructing a fish ladder around the diversion dam would not change the existing safety hazard.

Downstream Rock Fish Passage: This alternative would reduce the safety hazard with the construction of an established portage around the diversion dam. Signage and installation of a log boom or similar-type barrier upstream of the fish passage exit to

prevent boaters from attempting to float through the fish passage would also improve current conditions. The 2.5% rock ramp would also reduce the hazards associated with the diversion dam; however, boat passage would not be recommended. Rescue features would be incorporated into the fish passage and ramp structure to facilitate emergency response if someone attempted to pass over the dam. These features would include the installation of safety rings on the dam face to allow anchoring during whitewater rescues.

Downstream Rock Fish Passage with Whitewater Recreation Features: This alternative would further reduce safety hazards with the construction of whitewater features by providing a defined route for boaters. Non-Recovery Program funding would be used to cover incremental costs associated with this alternative. The Town of Palisade would maintain the whitewater features, remove debris, and address other safety issues as they arise. Downstream public access easements to the whitewater features would be obtained by the Town of Palisade. The Town of Palisade would assume liability and ownership of the whitewater features and manage the facilities. It is important to note that there are inherent hazards associated with whitewater recreation and these hazards would continue to exist (swift water, rocks, debris, bridge abutments, check structures, etc.).

Dam portage along river-right would not be safe because of the steep slope of the river shoreline and the close proximity of the dam head works, wing-walls, and the railroad. Signage including “no trespass” and “danger, keep out” would be installed to alert boaters to the hazards on river-right above the dam. An emergency portage around the dam would be constructed on river-left. The Town of Palisade would obtain public access below the dam using the existing road within the Union Pacific Railroad right-of-way and the E.R. Jacobson property. The Railroad may require additional improvements to address safety and railroad access concerns with the public using this access road. Rescue features as described in the Downstream Rock Fish Passage would also be incorporated into this alternative to assist in rescue activities.

The Orchard Mesa Irrigation District also identified a safety concern associated with their check structure downstream of the Price-Stubb Diversion Dam. The check structure allows the District, during periods of low river flow, to meet senior water rights at the GVIC Diversion Dam. The GVIC Diversion Dam is a low-head diversion dam that was notched in 1998 to provide fish passage. Boats and kayaks have used this notch to float downstream of the GVIC Diversion Dam. The check structure is a potential hazard similar to bridge abutments, and other river hazards. Appropriate signage to make boaters aware of the approaching hazard should adequately address the District’s concern.

Dam Removal: Removal would eliminate the dam safety hazard. After removal of the dam, the river channel would be typical of similar sections of the Colorado River. All protruding rebar would be removed from the remaining concrete. Riprap would be placed at each abutment to eliminate any vertical concrete faces. The riprap would create sloped surfaces similar to the river banks upstream and downstream of the abutments.

Downstream hazards (i.e. bridge abutments, check structures) would continue to exist but could be signed to notify boaters of the approaching hazards.

In conjunction with dam removal, one of the mitigation measure options for protecting the ability of Ute Water to pump from the Colorado River (see Page 19) would be implemented. Option 1 and 2 would have no effect on recreation. However, designs for option 3, which involves constructing a low head dam immediately downstream from the pump plant, would consider boater safety.

Land and Facility Resources

During construction of any of the construction alternatives, an increase in noise and traffic would occur. To date, Reclamation has not been advised of concerns for disturbances during construction. Any complaints would be resolved on a case-by-case basis. The Colorado Department of Transportation has advised Reclamation that access to the site from Interstate 70 would not be granted.

Protecting Existing Structures

The fish passage project could affect four existing structures in the project area; 1) the Union Pacific Railroad on the right bank of the river, 2) the Interstate 70 Highway on the left bank, 3) the Ute Water pump plant, and 4) the Colorado River Siphon located about 3,600 feet upstream from the dam. The Interstate, railroad, and siphon were built considering river flow and stream bank conditions that existed with the dam in place. Reclamation constructed the siphon, which is a pipeline under the riverbed of the Colorado River that carries water from the Government Highline Canal to the Orchard Mesa Power Canal.

Two factors could affect these structures: 1) scouring of the riverbed and banks, and 2) the rate of wetting or dewatering the foundations of the railroad and Interstate 70. River scour is a function of water velocities, the size of the cobbles in the riverbed, and the size of the riprap along the banks. If the dam is removed, the velocities of the water in the river would increase in the vicinity of the dam. As the velocity increases, the ability of the water to scour the banks and riverbed increases. If the banks and streambed are not adequately protected, the scour could move horizontally toward the railroad and Interstate 70. If the dam is not removed correctly, riverbed scour could extend upstream and could expose and damage the siphon.

Wetting (saturation of) the foundations of the railroad and Interstate 70 would weaken the foundations. If actions taken at the site raise the existing water levels, there could be impact to these structures. Since the siphon is buried beneath the riverbed, foundation wetting is not a concern.

Issue: Effects of alternatives on integrity and use of the highway, railroad, and siphon.

Existing Conditions: Upstream and downstream from the Price-Stubb Diversion Dam, riprap protects the foundations of Interstate 70, and the railroad. The siphon is located in a stable portion of the riverbed that has not shown significant scour. During flood stages and the corresponding high water levels, the railroad bed has reportedly become weakened due to foundation saturation in the vicinity of the dam. This is not a known issue with Interstate 70. However, CDOT has expressed concerns with fish passage construction limiting potential future widening of Interstate 70.

Impacts

No Action: The No Action alternative assumes the Jacobson Hydro No. 1 Project would not be built as described in the terminated FERC license. The No Action Alternative would have no effect on the hydropower plant's ability to divert water for power generation. The design capacity of the amended power plant is about 1,000 cfs. The No Action alternative would have no effect on the foundation of Interstate 70, future widening of Interstate 70, or railroad and Colorado River siphon foundations.

Conventional Fish Ladder: Impacts of constructing a fish ladder around the dam would be similar to those of the No Action alternative. If the Jacobson Hydro No. 1 Project were constructed with the conventional fish ladder, the tailrace of the hydropower plant would serve as an attraction flow for fish to find the fish ladder entrance. If the hydropower plant were not constructed, an attraction flow pipe would increase the cost of this alternative by about \$100,000. This alternative would have no effect on the foundation of Interstate 70, future widening of Interstate 70, or railroad and Colorado River siphon foundations. Due to the limited space between the dam and the railroad, construction of this alternative would be challenging.

Downstream Rock Fish Passage: This alternative would also have no effect on existing structures. The fish passage would protect the left bank of the river with additional riprap. If the Jacobson Hydro No. 1 Project as described in the terminated license agreement were constructed, an extended discharge pipe would be needed to attract fish to the fish passage entrance. To address CDOT's concerns with future Interstate 70 widening, the fish passage channel was offset 33 feet from the left river bank to accommodate future widening projects. Reclamation would armor the left river bank with suitable material to protect the fish passage channel during high flow events. Additional fill material to accommodate future Interstate 70 widening would be the responsibility of CDOT.

Downstream Rock Fish Passage with Whitewater Recreation Features: Effects under this alternative would be similar to the Downstream Fish Passage Alternative. This alternative also incorporates the 33 foot fish passage channel offset to accommodate future Interstate 70 widening. Boaters would use Colorado River State Park-Island Acres and public access through E.R Jacobson and Union Pacific Railroad

properties to access the whitewater features. Parking would be permitted only on the E.R. Jacobson property. The Town of Palisade would manage the area and provide law enforcement services through an agreement with Mesa County. Visual screening and signage along Interstate 70 and the railroad may be installed if required by CDOT and the railroad to discourage unauthorized river access and trespass.

Dam Removal: Dam removal would cause an increase in the water velocity upstream from the dam. Reclamation’s Technical Service Center conducted a hydraulic and scour analysis of the project (Collins, 1999). Analysis results presented in Figures 10 and 11 show the estimated river velocities with and without the dam. Figure 10 shows the velocities for a 100—year flood; Figure 11 is for comparison at lower peak flow of 10,500 cfs.

The velocity increase would be greatest at the dam and would gradually diminish upstream. Existing angular riprap on the west bank of the river would be sufficient to protect the railroad embankment from scour due to increased velocities upstream of the dam (Collins, 1999). Additional riprap would be placed along the Interstate 70 side of the river. At the Colorado River Siphon, the difference in velocity is negligible. Downstream from the dam, no change in river velocity is expected, and no increase in scour should result.

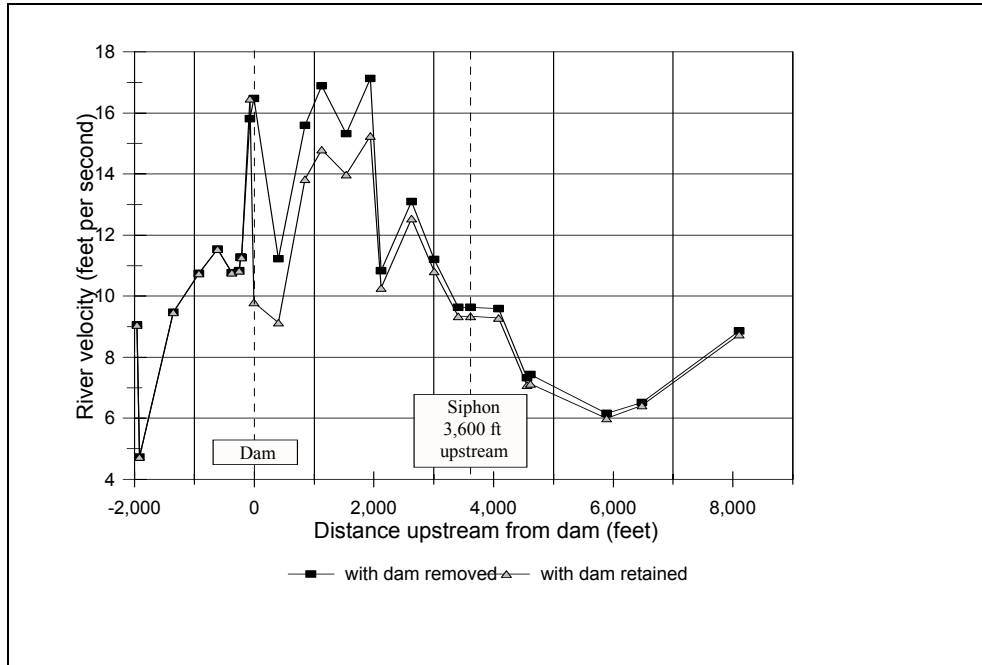


Figure 10-River Velocities at 100—year flood (44,500 cfs)

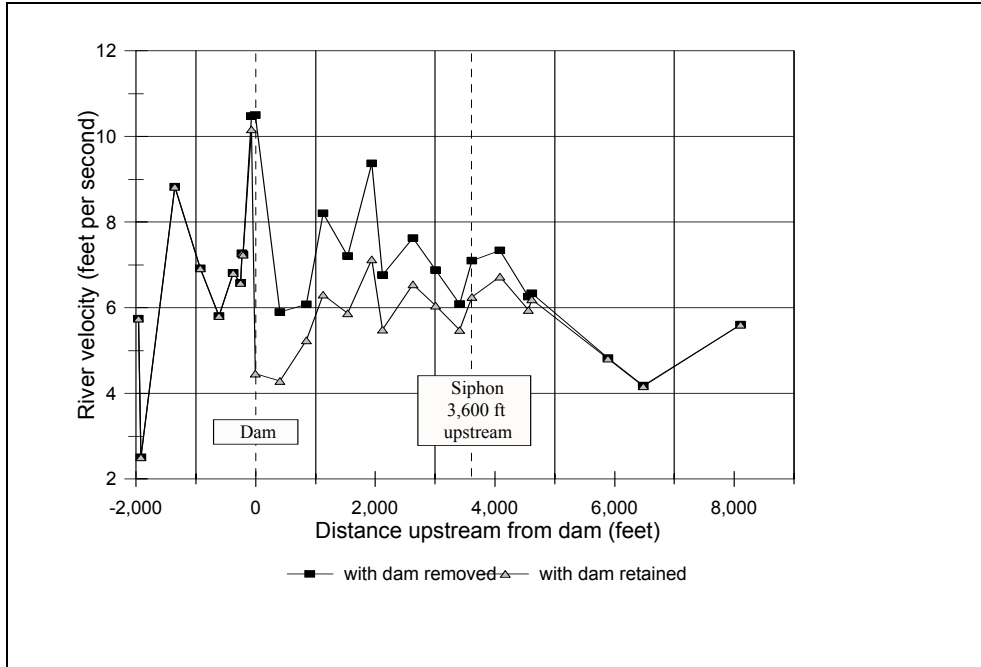


Figure 11-River Velocities at 10,500 cfs

Railroad and Landslide Stability

Approximately 1,000 feet upstream of the Price-Stubb Diversion Dam, on the westside of the Colorado River, is a historically active landslide. This landslide is a small portion of a very large inactive landslide mass that extends upstream about 1 ¼ miles to the Cameo Power Plant and about 1 mile west to Mount Lincoln. The active portion of the landslide lies between the Colorado River and the steep sandstone cliffs forming the west canyon wall (Figure 12). Railroad tracks, owned by the Union Pacific Railroad, are between the Colorado River and the over-steepened slopes of the landslide. The railroad grade cuts through the toe of the landslide.

Issue: Fish passage alternatives could affect the stability of an existing landslide and railroad.

Existing Conditions: The landslide in question is called the Tunnel No. 3 Landslide and is inspected annually as part of Reclamation’s Upper Colorado Regional Landslide Surveillance Program. Since, 1988, annual inspections have revealed no visible evidence of movement, however, the slide has been active in the past. In February and March 1950, this slide became active and collapsed part of Tunnel No. 3 through which water for the Government Highline Canal flows. Damage was so extensive that the tunnel had to be rerouted further into the hillside in sandstone bedrock. The slide disrupted railroad traffic as well, and the track alignments had to be reestablished (Murdock, 1950).

In February and March 1988, movement of the landslide occurred again. No damage was done to Reclamation facilities, but railroad traffic was disrupted as the tracks had to continually be realigned. To halt the movement of the landslide, the Denver and Rio Grande Western Railroad, owners of the railroad then, removed material from the top one-third of the slide and stockpiled it just downstream of the slide. No evidence of further movement has been observed or reported since this material was removed.

It is not know what triggered movement of this slide in 1950 and 1988. No clear correlation is evident with high precipitation events. However, the entire area is over-steepened and in a state of delicate balance. Long-term changes in moisture content within the slide mass or removal of supportive material at the toe may have contributed to the historic movement.

The stability of this landslide becomes an issue if the proposed fish passage significantly alters river dynamics. Two basic concerns are: 1) potential erosion of the toe of the landslide caused by increased flow velocities in the river, and 2) potential rise of the water table within the landslide mass. Both conditions would contribute to instability of the landslide mass and may trigger movement that would be detrimental to the railroad.

Erosion of the toe of the landslide mass due to increased flow velocities of the Colorado River would contribute directly to landslide instability. The removal of material by this erosion process essentially removes weight that helps stabilize the landslide mass. Therefore, any erosive action at the toe of the landslide is undesirable. Increased flow velocities would be acceptable if down-cutting or scouring did not occur near the landslide.

A rise of the water table within the landslide mass would also contribute to landslide instability. As water levels rise within a landslide mass, pore-water pressures are increased and slippage along a water-saturated plane is more likely to occur. Furthermore, a sudden increase or decrease in the water table may trigger movement. A gradual decline and maintenance of a lower overall water table would increase the stability of the landslide. The possibility of future movement is high since the area is very unstable and natural climatological and/or hydrological conditions could easily trigger movement of this slide. In addition, the existing road that parallels the railroad tracks below the dam is Union Pacific Railroad's only access to the tracks. Any activity that restricts their access would negatively affect the Railroad's ability to provide railroad track maintenance.

Impacts

No Action: The terminated Jacobson Hydro No. 1 Project proposed to raise the water level with flashboards on the dam, and the 1990 FERC license required development of an erosion control plan for review by the railroad. The fixed flashboards would raise the water table by approximately 4 feet. This could cause a slight decrease in landslide stability. Without the terminated Jacobson Hydro No. 1 Project, the No Action alternative would have no affect on the Tunnel No. 3 landslide.

Conventional Fish Ladder: Construction of a fish ladder around the existing diversion dam would have little or no effect on the stability of the Tunnel No. 3 landslide provided there is not an overall increase in the river water surface elevation. Temporary construction easement from the railroad would be needed to construct the ladder. In discussions with the Railroad, temporary construction access through the railroad right-of-way would not negatively impact the railroad.

Downstream Rock Fish Passage: Construction of the downstream rock fish passage would have no effect on the stability of the Tunnel No. 3 landslide. Temporary construction easement from the railroad would be needed to construct the fish passage. In discussions with the Railroad, temporary construction access through the railroad right-of-way would not negatively impact the railroad.

Downstream Rock Fish Passage with Whitewater Recreation Features: Construction of the downstream rock fish passage and whitewater features would have no effect on the stability of the Tunnel No. 3 landslide. Temporary construction easement from the

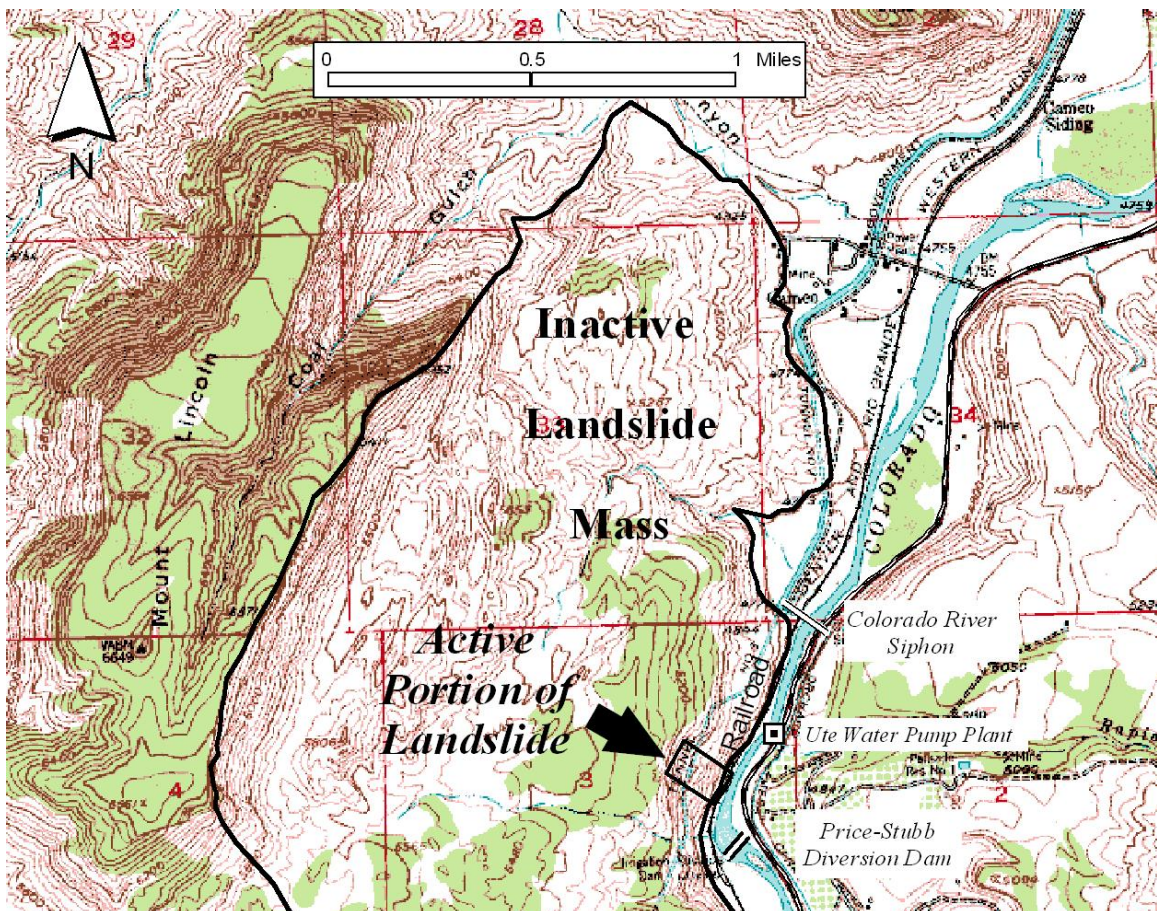


Figure 12-Landslide Location Map.

railroad would be needed to construct this alternative. In discussions with the Railroad, temporary construction access through the railroad right-of-way would not negatively

impact the railroad. Granting public access to the Town of Palisade through the railroad right-of-way could negatively affect the railroad's ability to maintain the railroad tracks and bring the public in close proximity to the railroad tracks. Negative effects could be reduced or avoided by maintaining the existing gate at the access entrance. The gate could be locked when railroad maintenance activities occur to avoid conflicts with the public. In addition, the Town of Palisade could establish a schedule for when the whitewater parks is open and lock the gate after hours. This would help reduce the incidents of undesired activities (parties, camping, etc.) from occurring in the area. Routine patrols and other enforcement activities would further reduce these incidents.

During planned events (whitewater rodeos, competitions, etc.), the use of temporary fencing to separate the Whitewater Park from the Railroad right-of-way could be used to keep the public away from the railroad tracks. In addition, the use of shuttles and other parking areas would further reduce potential conflicts and congestion during large events.

Dam Removal: Removal of the Price-Stubb Diversion Dam would change river dynamics upstream of the dam in the vicinity of the Tunnel No. 3 landslide. A preliminary scour study conducted by Reclamation's Technical Service Center (Lyons, 1998) shows the average flow velocity of the river would increase in the reach from the diversion dam upstream to the Colorado River Siphon. However, this study indicated no channel degradation would be anticipated since there is no extensive area of sediment deposition upstream of the dam.

In the preliminary study, assumptions were made concerning the composition of the riverbed. A more formal study was subsequently conducted, and riverbed samples were taken and analyzed. In addition, scuba divers conducted a survey of the deeper portion of the riverbed upstream from the dam (Collins, 1999). The results of these studies fundamentally agreed with the initial study, except they anticipate the removal of about 2 to 3 feet of fine materials that have been deposited behind the dam. It is believed that under the existing conditions, these materials are flushed annually during spring runoff, and are re-deposited after the higher flows subside.

Another study completed by Reclamation's Technical Service Center specifically analyzed the effects of dam removal on the stability of the Tunnel No. 3 landslide (Pabst, 1999). Detailed geologic information is limited for this slide and a monitoring program is in place. The main conclusion from this study was that dam removal should not have a negative impact on slide stability assuming no river scour occurs. Lowering the river water surface would cause a lowering of the water table within the landslide mass, which would slightly increase landslide stability. A rapid drawdown of water surface or an overall increase in water surface would contribute to instability of the landslide. Since dam removal would occur during low flow conditions, and the dam would be breached in a controlled manner, a rapid drawdown of the river surface would not occur.

Ownership of Dam and Lands

Issue: Before any modification to the dam and site could be made, permission would be needed from the dam and adjacent land owners to access the site and/or use their lands and facilities.

Existing Conditions: For purposes of this project, Reclamation considered two separate ownership issues: 1) ownership of the land that could be affected, and 2) ownership of the Price-Stubb Diversion Dam. Figure 13 shows recorded land ownership. Land owners that may be affected by the project include (Figure 13):

- Colorado Department of Transportation—lands downstream of the dam for construction, access to the site for construction, long-term operations, and maintenance. CDOT also exercises Right-of-Way authority for Interstate 70 within the project area.
- Palisade Irrigation District—land under the Interstate 70 side (river left) of the dam.
- E.R. Jacobson (Jacobson Hydro No. 1 Project)—land owned along the railroad side (river right) of the dam and downstream.
- Union Pacific Railroad—congressional right-of-way next to the dam site; access to the site is within this right-of-way.

The Palisade and Mesa County Irrigation Districts built the actual dam structure. Minutes of their board meetings clearly show both Districts consider themselves the joint owners of the dam.

Impacts

No Action: Since no fish passage or dam removal is considered in this alternative, no land or facility ownership rights would be changed. Current land owners have to resolve any questions regarding dam ownership.

Conventional Fish Ladder: Access agreements and temporary easements would be necessary from all of the land owners identified above. Temporary construction access would be required from the Union Pacific Railroad, and E.R. Jacobson. Reaching an agreement with Palisade and Mesa County Irrigation Districts to modify the dam would also be necessary. Permanent access agreements would also be needed from E.R. Jacobson and the Union Pacific Railroad for long-term operations and maintenance of the fish ladder.

Downstream Rock Fish Passage: Access agreements and temporary easements would be necessary from all land owners. Temporary construction access would be required from E.R. Jacobson, CDOT, and the Union Pacific Railroad. Palisade and Mesa County Irrigation Districts would also have to consent to modify the dam. A permanent easement for the fish passage structure would be needed from CDOT, Palisade and Mesa

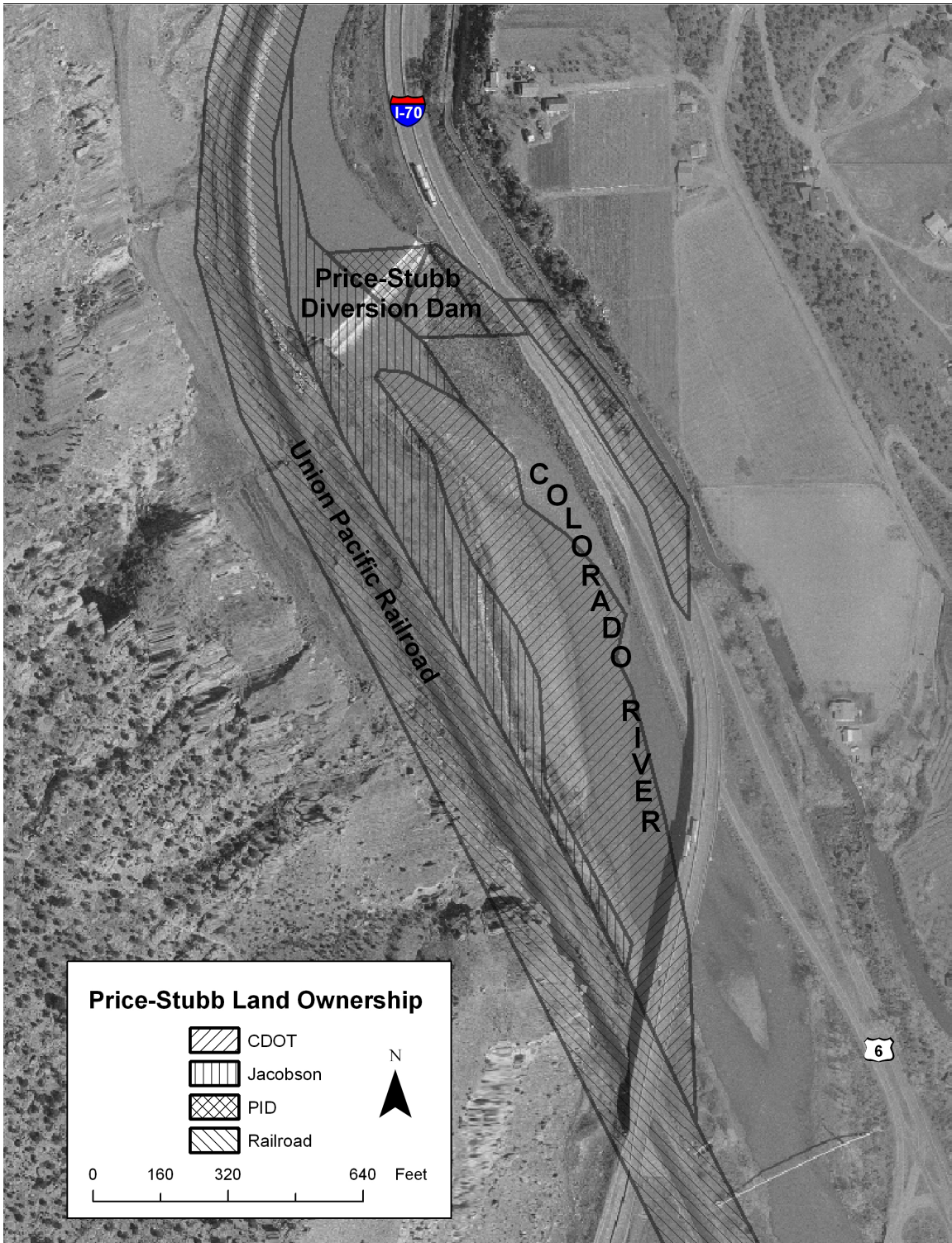


Figure 13-Land Ownership Below the Price-Stubb Diversion Dam

County Irrigation Districts and E.R. Jacobson. Reclamation would request temporary access to provide maintenance of the fish passage as needed.

Downstream Rock Fish Passage with Whitewater Recreation Features: This alternative would require additional authorization from CDOT and E.R. Jacobson for the construction of the whitewater features because these structures would be located on their properties. Public access easements from E.R. Jacobson and Union Pacific Railroad obtained by the Town of Palisade would be required.

The Downstream Rock Fish Passage with Whitewater Features would attract use to this stretch of the river with boaters accessing the Colorado River upstream of the Price-Stubbs Diversion Dam from the Colorado River State Park-Island Acres and through the public access below the dam obtained by the Town of Palisade. This alternative would allow uninterrupted boating to Westwater Canyon in Utah, a distance of about 64 miles. The Railroad currently does not allow public access through their right-of-way and has identified concerns with granting public access. The Town of Palisade would need to address these concerns to obtain public access.

Dam Removal: As discussed in the other action alternatives, access, and/or land use agreements would be necessary from all the owners identified above. Construction access would be required from CDOT, Palisade and Mesa County Irrigation Districts, the Union Pacific Railroad, and E.R. Jacobson. Permission from Palisade and Mesa County Irrigation Districts to remove the dam would also be required; the Palisade Irrigation District has opposed dam removal.

Unique Geographic Features

To meet requirements of environmental laws and U.S. Department of the Interior policies, Reclamation specifically addresses potential impacts of any proposed action on unique geographic features—which include prime and unique farmland, wild or scenic rivers, rivers placed on the nationwide river inventory, refuges, floodplains or wetlands. Providing for fish passage at the Price-Stubbs Diversion Dam would have no effect on prime or unique farmland. Affected reaches of the Colorado River are not under study or recommendation for designation as a wild or scenic river. Similarly, no refuge exists in the affected area. However, each alternative involves actions that would take place in the Colorado River and its 100-year floodplain.

Floodplain and Wetland Protection

Issue: The Colorado River provides highly valued habitat and floodplain functions that need to be considered as fish passage is restored.

Existing Conditions: The area is highly altered from its natural state. During construction of Interstate 70, the Colorado River channel downstream of the dam was altered. The existing river channel was shifted to the west to create the foundation for Interstate 70. Materials were excavated to create the new channel and used as fill for the foundation. Riprap was used to armor the left riverbank, preventing the river from cutting back to its original location and undermining Interstate 70.

The surface area of the pool upstream of the dam is about one-acre in size, and the riverbank is protected from erosion by riprap along the highway and railroad beds. The plunge pool at the base of the dam is deep, and a long riffle reach extends downstream. Deposition and transportation of sediment in the river depends on variations in seasonal and annual river flows.

Narrow vegetated strips dominated by willow and tamarisk occur along the river, but very little riparian vegetation is in the construction area at the Price-Stubb Diversion Dam. A small patch of shrubs and a mature cottonwood tree at the dam may be of importance to birds.

Impacts

No Action: The No Action alternative assumes the Jacobson Hydro No.1 Project would not be built as described in the terminated FERC license and would have no effect on floodplain or wetland resources. However, if the hydropower project were built, mitigation measures required to reduce wetland impacts from its construction would be identified as part of the licensee's 404 permit.

Conventional Fish Ladder: A mature cottonwood tree at the site would be lost. Due to the limited space, routing a fish ladder around the cottonwood tree is not possible. Revegetation of the site would mitigate for temporary losses of other vegetation. Section 404 permits would be required to discharge fill material for a temporary construction cofferdam and the fish passage entrance and exits in the river. Reclamation would request authorization under Regional General Permit No. 57, Projects beneficial to endangered fish. Permit conditions would be implemented as environmental commitments.

Downstream Rock Fish Passage: Section 404 permits would be required to place boulders, riprap and fill material into the Colorado River to create the downstream fish passage. Reclamation would request authorization under Regional General Permit No. 57, Projects beneficial to endangered fish. Permit conditions would be implemented as environmental commitments. Construction contracts would require protection of downstream water quality, revegetation of disturbed areas would rapidly mitigate losses of vegetation.

Downstream Rock Fish Passage with Whitewater Recreation Features: This alternative is similar to the Downstream Rock Fish Passage alternative; however additional 404 permits would be needed to incorporate the whitewater features.

Reclamation would request authorization for the fish passage under Regional General Permit No. 57, projects beneficial to endangered fish. In initial discussion with the Army Corps of Engineers, additional permits may be needed to construct the whitewater features. In addition, separate 404 permits may be needed for maintenance of the whitewater features. The entity that assumes management and maintenance responsibility of the whitewater features would need to contact the Army Corps of Engineers prior to conducting some maintenance activities to determine if a 404 permit is required. Reclamation would request Section 404 authorization for maintenance of the fish passage as needed, however this is predicted to be infrequent.

Recreational boaters who use established put-in and take-out sites (i.e. Colorado River State Park-Island Acres, if developed) would have minimal impact on riparian areas. Points of unauthorized access may result in the minor loss of some riparian vegetation (i.e. trampled willows). The establishment of a foot trail leading to the river from the parking area on E.R. Jacobson and CDOT properties would help reduce impacts to riparian habitat. This type of damage is predicted to be minimal but could be further diminished using appropriate barriers and “No Trespassing” signs if problem areas develop.

Unauthorized access and riparian vegetation impacts could be further reduced if CDOT and E.R. Jacobson were to grant public access to the whitewater features through their properties downstream of the dam. This would allow for the development of a defined portage trail to manage access around the dam to reduce the amount of riparian disturbance. Recreational interests envision a world class whitewater park possibly managed by the Town of Palisade with a developed parking area downstream of the dam and public restrooms. The whitewater park is not included in this alternative, but could be developed in the future with adequate funding and agreements between recreational interests, the Town of Palisade, Union Pacific Railroad, CDOT and E.R. Jacobson.

Dam Removal: The contract for dam removal would also require Section 404 permits for riprap placement for erosion protection and temporary cofferdams for construction dewatering. Revegetation of disturbed areas would rapidly mitigate losses of vegetation.

Fish and Wildlife Resources

The affected area, for purposes of assessing impacts to fish and wildlife, correspond to the 100-year floodplain of the Colorado River from the Price-Stubb Diversion Dam upstream to Rifle. There are no significant concerns for project effects on fish and wildlife resources in general; concerns focus on avoiding adverse impacts to endangered species (Service, 1999a), as well as complementing efforts to establish self-sustaining populations of endangered Colorado River fish species.

No Federally listed threatened or endangered mammals or plants are known to occur in the project area that would be affected by the proposed action. The bald eagle is a regular winter visitor to the Colorado River corridor that occasionally perches and roosts in large

cottonwood trees along the river. A mature cottonwood tree is present in the vicinity of the Price-Stubb Diversion Dam, however bald eagle use of this tree has not been observed.

Reclamation has concluded that the proposed action would have no effect on bald eagles. Construction contracts would require work to stop if activities are thought to be affecting any listed species.

Effects on Endangered Colorado River Fishes

Issue: Providing fish passage at the dam is needed to allow endangered fish access to upstream habitat (see page 3). Passage actions should complement other Recovery Program efforts such as stocking of endangered fish, controlling competition or predation by nonnative fish, and restoring habitat.

Existing Conditions: The Price-Stubb prevents access by endangered fish to suitable habitat upstream. Two of the four endangered Colorado River fishes, the humpback chub and bonytail, do not occur in the reach of the Colorado River involved in this fish passage project. However, the Recovery Program plans to stock bonytail between Palisade and Loma within the next 5 years. The affected reach is within designated critical habitat for the Colorado pikeminnow and razorback sucker. These fish are known to occupy habitat downstream from the dam, but the Colorado pikeminnow is absent in the 50 miles of its historic range from the Price-Stubb Diversion Dam upstream to Rifle, and razorback sucker are extremely rare.

A dramatic decline in razorback suckers occurred between 1974 and 1991 in the Colorado River. In 1991 and 1992, 28 adult razorback suckers were collected from isolated ponds adjacent to the Colorado River near DeBeque, Colorado. No young razorback suckers have been collected in recent surveys of the Colorado River.

Other native fish species found in the Colorado River include flannelmouth sucker, bluehead sucker, mountain sucker, and roundtail chub. Fish surveys upstream and downstream of the dam show a higher composition of native than nonnative species upstream of the dam, and many of the nonnative species found downstream of the dam are absent upstream (Wydoski, 1994). Nonnative fish species that are absent upstream include channel catfish, northern pike, red shiner, largemouth bass, bluegill, and black crappie. Black bullhead, smallmouth bass, and green sunfish are rare (Service, 1998).

Predation by and competition with nonnative fishes are believed to be significant factors in the decline of the endangered Colorado River fishes. Channel catfish and green sunfish, along with other sport fish such as smallmouth and largemouth bass, and northern pike, are predators of endangered fish. Off channel ponds have been identified as a source of many of the nonnative sport fishes that occur in the river and endangered fish nursery areas. Small nonnative fish (minnows and shiners) are assumed to be significant predators of fish larvae as well as important competitors (Wydoski, 1998). Fathead minnow and sand shiners are more common downstream from the dam, and red

shiners have been found downstream of the dam, but not upstream (Service, 1998). The distribution of native and nonnative fish upstream and downstream of the dam indicate the dam also serves as a barrier to nonnative fish, and may help control the spread of nonnative fish upstream.

One radio-tagged Colorado pikeminnow was documented using the scour hole below the Price-Stubb Diversion Dam in 1986 and 1987 (Burdick, 2002). The portion of the Colorado River and its 100 year floodplain between GVIC Diversion Dam and the Grand Valley Project Diversion Dam (including the Price-Stubb Diversion Dam) are included in the designated critical habitat for the Colorado pikeminnow and razorback sucker.

Impacts

No Action: If no passage is provided, a self-sustaining population of endangered fish would be less likely to develop via a natural upstream recolonization. Even if stocked fish mature, and succeed in reproducing upstream, young fish that drift or move downstream of the dam could not return as adults. If native fish cannot access upstream habitat, related Recovery Program efforts to acquire and restore floodplain habitat, stock endangered fish, and remove nonnative fishes would be less effective.

Conventional Fish Ladder: The ladder would be similar to the Redlands fish ladder constructed in June 1996. Since its completion, 47 Colorado pikeminnow, 5 razorback sucker and about 36,400 native fish have passed through the Redlands fish ladder (Burdick, 2002). Installation of a fish trap to allow selective passage would prevent upstream access by nonnative fish. A fish trap at this location has some advantages, however, a fish trap was included in the construction of the Grand Valley Project Diversion Dam fish passage about 5 miles upstream.

Downstream Rock Fish Passage: Concerns for ease of fish use would be similar to those of building a conventional fish ladder. However, the passage would be more natural than the conventional type.

Filling the scour hole with riprap material below the Price-Stubb Diversion Dam would likely eliminate its use by Colorado pikeminnow. However, restored fish passage at the Price-Stubb Diversion Dam and Grand Valley Project Diversion Dam would provide endangered fish access to about 50 miles of critical habitat. Reclamation formally consulted with the Service (Service, 2003) regarding the downstream rock fish passage and an incidental take statement was issued under the Colorado Programmatic Biological Opinion for potential incidental take associated with nonnative fish and the loss of the scour hole below the dam. The Service concluded that the downstream rock fish passage alternative would be beneficial to the endangered fishes and that selective passage would be constructed at the Grand Valley Project Diversion Dam upstream. A copy of the Biological Opinion from this consultation is included in the appendices.

Downstream Rock Fish Passage with Whitewater Recreation Features: Effects under this alternative would be similar to the Downstream Rock Fish Passage

alternative. Whitewater features would likely draw additional public attention to the fish passage, which could provide opportunities to educate the public about endangered fish needs and the Recovery Program goals. Additional consultation with the Service regarding this alternative may be necessary to comply with Section 7 of the Endangered Species Act. Reclamation has informally discussed this alternative with the Service to identify concerns. Reclamation would request that the Service review the final designs to ensure the existing biological opinion is adequate for Section 7 compliance.

Dam Removal: Removing the man-made barrier and letting the river channel return to a natural condition would be the most beneficial passage alternative for the endangered fish. If the option to modify the river channel upstream of the dam to maintain the water surface elevation at the Ute Water pump plant is pursued (see page 19), designs for the structure would be reviewed by the Service to ensure that it would not create new fish passage problems. Dam removal would also require the filling of the scour hole below the dam with riprap material.

Selective passage has been constructed at the Grand Valley Project Diversion Dam, which is the last remaining barrier to upstream movement. Nonnative fish would thus be prevented from moving further upstream into the critical habitat extending to Rifle, Colorado. However, fish passage at Price-Stubb would allow nonnative fish to access Plateau Creek and the 5 miles of the Colorado River upstream to the Grand Valley Project Diversion Dam.

The benefits of dam removal to endangered fish include (Nelson, 1999):

1. Only one fish ladder would be constructed instead of two. Multiple ladders tend to have cumulative effects on migrating fish. It would be easier and less stressful for fishes to migrate both upstream and downstream. During spawning migrations, adults would expend less energy reserves needed for spawning. Migration delays could adversely affect reproduction success.
2. Fish predators tend to congregate below dams. Downstream migration may result in mortality as endangered fish go over the dam spillway, become stunned and disoriented, and fall prey to predators. Removal of the Price-Stubb Diversion Dam would remove one of the spillways.
3. With the dam in place, there would always be a threat of hydropower development and associated impacts (entrainment, impingement, mechanical injury, and mortality). Fish that pass through power-generation turbines can be injured or killed.
4. Ladders result in fishes being concentrated in one place, which may result in predation, competition, and disease transfer. Fewer ladders may result in less predation on endangered fishes attempting to migrate upstream. The likelihood of moving greater numbers of fish upstream is better with one ladder than two.

Reclamation concludes that each fish passage alternative would have no effect on the humpback chub, and would complement efforts of the Recovery Program to stock bonytail. The Colorado pikeminnow, razorback sucker, and their critical habitat may be adversely affected with nonnative fish access above the Price-Stubb Diversion Dam. During formal consultation regarding the Downstream Rock Fish Passage alternative, the Service identified selective fish passage at the Grand Valley Project Diversion Dam as a reasonable and prudent measure to reduce adverse effects on the endangered fishes and their critical habitats (Service, 2003). A copy of the Service's biological opinion is included in the appendices. Each passage alternative, excluding no action, would assure access to critical habitat by the endangered fish to improve chances of their recovery. Instream construction activities would be avoided from May to September to minimize impacts to endangered fish spawning and larval development.

Cultural Resources

The area of potential effect for an investigation of cultural resource impacts extends along the Colorado River from Palisade to the Price-Stubb Diversion Dam. Prior to settlement and development of irrigation facilities, the area was part of the Ute Indian Reservation that covered western Colorado. After moving the Ute Indians to reservations in Utah and southwestern Colorado, Congress declared the lands public and open for filings in June 1882. By November 1882, the Denver and Rio Grande Railroad was completed from the Gunnison River Valley to Grand Junction. In 1889, tracks were extended along the Colorado River, past the current site at the Price-Stubb Diversion Dam. The dam and associated pumping facilities were completed in 1911 to supply irrigation water to the Price and Stubb Ditches for use by early settlers in the Palisade area.

Reclamation's review of reports and historic preservation actions for various undertakings in the affected area produced documentation of turn of the century irrigation features of historical importance, including the Price-Stubb Diversion Dam. No significant archaeological sites have been found. As a standard cultural resource protection measure, all fish passage construction contracts would require work to be stopped if cultural resource sites were encountered. Work could not resume until measures needed to avoid or minimize adverse impacts to significant resources are agreed to by the Colorado State Historic Preservation Officer (SHPO).

Protect Historic Dam

Issue: 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 historic qualities of eligible sites.

Existing Conditions: Since 1919, Palisade and Mesa County Irrigation Districts have not used the Price-Stubb Diversion Dam and associated facilities to divert flows of the Colorado River to irrigate their lands. The Price-Stubb Diversion Dam is in good condition despite a long period of non-use. However, there is concern that the scour hole below the dam may be undermining the foundation of the dam. The canal head works have deteriorated, and the associated pump canal and pump plant have been destroyed over the years.

E.R. Jacobson first recorded features of the historic system in 1981 to obtain a preliminary FERC permit to study its water power development potential. Reclamation also recorded the site in 1982, under the name “Palisade Dam (5ME769). The Jacobson Hydro No. 1 Project proposed to use each feature of the abandoned system in developing the hydropower project. The application for the license (Jacobson, 1983) notes the stone lining of the diversion pool at the canal head works is intact only on its northwest side.

After its abandonment, the canal was filled in with earth. A stone wall or lining that is evident on the east side of the canal and next to the river, may be original. Only the foundation of the pump plant remains. Of all the features of the abandoned system, only the Price-Stubb Diversion Dam has not undergone extensive change or obliteration.

In 1984, the SHPO determined that the dam was eligible for listing on the National Register of Historic Places—as a classic example of an ogee crest dam built between 1910-1920 that retains its integrity, and due to its association with a prominent engineer, Charles D. Vail (FERC, 1989). The Price-Stubb Diversion Dam was constructed early in Vail’s career; he is best known for his role in the completion of mountain passes and canyon highways as Colorado’s State Highway Engineer after 1930.

As discussed in the Railroad and Landslide section, a landslide occurred upstream of the dam in early 1988. The slide did not affect the dam and canal head works, but did impact rail service. When the Denver and Rio Grande Railroad unloaded the slide, they removed material from the top one-third of the slide and deposited it over the abandoned canal route. However, the outline of the wall of this canal remains apparent in 1994 aerial photos of the area.

Consultation between FERC and SHPO on the Jacobson Hydro No. 1 Project confirmed the eligibility of the dam for listing on the National Register of Historic Places (FERC, 1999). In addition, the SHPO determined the old canal and pump plant had lost their integrity, and were not eligible for the Register.

Impacts

Any undertaking that involves the destruction, damage, or alteration of any property that qualifies for inclusion in the National Register of Historic Places is considered an adverse effect (36 CFR Part 800). While FERC has consulted with the SHPO regarding the Jacobson Hydro No. 1 Project, the consultations do not specifically discuss plans for fish passage or its impacts. Reclamation has consulted with the SHPO to verify effects of the

alternatives, and entered into a Memorandum of Understanding regarding mitigation requirements for adverse effects to the Price-Stubb Diversion Dam.

No Action: The No Action alternative would have no effect on the historic qualities of the Price-Stubb Diversion Dam.

Conventional Fish Ladder: Modification of the head gate and the diversion dam would alter the historic dam. Reclamation would agree to document the modifications.

Downstream Rock Fish Passage: The Price-Stubb Diversion Dam would be adversely affected by notching the dam and having the entire downstream face of the dam buried in boulders and riprap material. Reclamation entered into a Memorandum of Understanding (MOU) with the SHPO to collect historic documentation, drawings, and photographs of the dam in a report about the dam's design, construction and abandonment as mitigation for adverse impacts. During fish passage construction, photographs would be taken to meet agreed upon standards for architectural and engineering records.

Downstream Rock Fish Passage with Whitewater Recreation Features: The Price-Stubb Diversion Dam would be adversely affected by the construction of two notches in the dam and having the entire downstream face of the dam buried in boulders and riprap material. As described in the Downstream Rock Fish Passage alternative, Reclamation entered into a MOU with SHPO to mitigate adverse impacts.

Dam Removal: Dam removal would physically destroy the integrity of the Price-Stubb Diversion Dam. Although certain features of the dam would remain, the most visible portion of the dam would be removed. In addition to significantly altering the appearance of the structure, this action would alter the visual landscape by eliminating the sight of the river flowing over the dam.

Reclamation would need to consult with SHPO to determine if mitigation measures described in the current MOU are adequate to mitigate the adverse impacts of this alternative. Reclamation would also consider development of a historic marker/interpretive sign for public viewing. Reclamation would not agree to place any sign or viewing area along Interstate 70 due to public safety concerns associated with the narrow canyon and high speeds of vehicles on the Interstate. Signs and/or a viewing area accessed via roads or trails on the opposite side of the river may be possible. Reclamation's commitment would be contingent on all potentially affected land owners (CDOT, E.R. Jacobson, the Union Pacific Railroad, and Palisade and Mesa County Irrigation Districts) provide written approval of the mitigation measures.

Indian Trust Assets

Indian trust assets are defined as legal interests in property held in trust by the United States for Indian Tribes or individuals, or property that the United States is otherwise

charged by law to protect. No Indian trust assets are known to occur in the project area and therefore no impacts are predicted under any of the alternatives.

Environmental Justice

Executive Order 12898 established environmental justice as a federal agency priority to ensure that minority and low-income groups are not disproportionately affected by federal actions. The ethnicity of the majority (90 percent) of the residents in the project area is Caucasian (Grand Junction Chamber of Commerce, 1997). Other ethnicities of persons in the area include Hispanic (8 percent); and Native American, Asian, and African-American (each less than 1 percent).

There are no disproportionate negative impacts predicted for any particular group of individuals under any of the alternatives.

Social and Economic Factors

Construction of any of the passage alternatives would provide a minor amount of local employment. This would introduce a small amount of money into the local economy, but is not expected to place a strain on public services such as schools or transportation. As discussed previously in the Recreation Resources section, the downstream rock fish passage alternatives and dam removal would increase the potential for recreational boating upstream from the Price-Stubb Diversion Dam and may increase economic activity associated with tourism. The potential for hydroelectric power generation at the dam site would vary under each alternative.

Hydropower

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

Existing Conditions: Currently, no hydropower generation is taking place at the Price-Stubb Diversion Dam. In 1990, FERC issued a license to develop hydropower, but the project was put on hold in 1994. The licensee applied and received a license amendment in 2001 and the license was terminated in 2002 (FERC, 2001; FERC 2002c).

Impacts

No Action: If constructed as described in the 2001 license amendment, the Jacobson Hydro No. 1 Project license requires the construction, maintenance, and operation by the licensee of such fishways (ladder or passage) as the Secretaries of

Interior and Commerce may prescribe. The Jacobson Hydro No. 1 Project would produce about 6.8 million kilowatt hours (kWh) of power annually (FERC, 1990). For comparison purposes, the coal-fired Xcel Energy's Cameo Power Plant generates about 550 million kWh annually. Income from the hydropower project would be used to recover project development costs and provide long-term revenues. As the population of the Grand Valley increases, power demand would increase. Although the proposed unit is a very small percentage of total power generation in the Grand Valley, it may offset associated impacts to air quality and extraction activities related to generating power using fossil fuels. As discussed previously, Reclamation assumes that under the No Action alternative, the Jacobson Hydro No. 1 Project would not be constructed.

Conventional Fish Ladder: Impacts to hydropower would be similar to the No Action alternative because of the FERC amended license requirements (FERC, 2001). However, if the fish passage were constructed before the hydropower project, the construction area of the hydropower plant would be further confined.

Downstream Rock Fish Passage: Hydropower generation potential would be greater in this alternative because of the additional area available for hydropower plant access and construction. This alternative would also maintain head for power generation. However, the project proponent would be required to pipe the hydropower plant discharge to the fish passage entrance.

Downstream Rock Fish Passage with Whitewater Recreation Features: Construction of the whitewater features would reduce hydropower generation potential when compared to the Downstream Rock Fish Passage alternative. Depending on the location of the hydro plant's discharge, some head could be lost. Recreational interests and E.R. Jacobson have tentatively reached agreements that if the hydro plant were constructed, the hydro plant would not operate or reduce its diversions on weekends and holidays to provide additional water for recreation.

Dam Removal: No power would be generated.

Costs and Benefits

This section discusses the relative costs and benefits of each alternative on the human environment, including benefits to the endangered fish. Success of the Recovery Program in restoring populations of the endangered fish directly affects future development of Colorado River water supplies. Since 1988, the Recovery Program has been relied on to serve as a reasonable and prudent alternative to jeopardizing effects of water development on the endangered fish. Its existence has allowed the Service to issue favorable biological opinions on numerous water projects in Colorado, Utah and Wyoming with a potential to use more than 1.7 million acre-feet of water. Completion of fish passages at the Redlands and GVIC diversion dams contributed to sufficient progress of the Recovery Program in 1996 and 1998.

Issue: Some people question using taxpayers' money to provide passage for endangered fish.

Existing Conditions: The Colorado River is a key factor in the economy of the Grand Valley area. The river supports agricultural enterprises, municipal water supplies, state parks and wildlife areas, tourism, recreational uses, and a population of endangered fish. Recovery of the endangered fish is not without significant expense, controversy, or problems. However, many believe the Recovery Program is the best method to avoid conflicts between endangered fish recovery and allowing water to be developed. The Recovery Program would fully fund costs for construction of fish passage or dam removal.

Impacts

No Action: According to Article 411 of the Jacobson Hydro No. 1 amended FERC license, FERC reserved the authority “to require the licensee to construct, operate, and maintain, or provide for the construction, operation, and maintenance of, such fishway as may be prescribed by the Secretary of the Interior”. If no action is taken by the Recovery Program and hydropower is not developed, fish passage would not be constructed at the Price-Stubbs Diversion Dam.

Conventional Fish Ladder: Reclamation estimates the cost for this alternative to be about \$4,300,000. Long-term operation and maintenance cost are estimated to be about \$400,000 for the life of the project. This alternative would preserve the dam structure, which could allow future hydropower development.

Downstream Rock Fish Passage: Reclamation estimates the cost for this alternative to be about \$4,800,000. This alternative would provide the benefit to endangered fish while removing the need to mitigate for upstream affects associated with dam removal. The Recovery Program has identified concerns with having two conventional ladders in short proximity of each other. Design criteria for fish passage at the Grand Valley Project Diversion Dam made a rock fish passage cost prohibitive. No long-term maintenance costs are anticipated.

Downstream Rock Fish Passage with Whitewater Recreation Features: The estimated total cost for this alternative is approximately \$5,400,000. The incremental costs associated with this alternative are estimated to be between \$400,000 and \$600,000. The additional funding would be provided from a Great Outdoors Colorado Grant and other funds raised by the Town of Palisade and W.A.T.E.R. The Town of Palisade submitted a Great Outdoors Colorado (GOCO) grant application requesting \$400,000 and W.A.T.E.R. has conducted fund raising activities to obtain additional funds. Reclamation's estimated Recovery Program costs for this alternative would be the same as the Downstream Rock Fish Passage Alternative, approximately \$4,800,000. If Non-Recovery Program funding is obtained prior to initiating construction of the fish passage, Reclamation would construct the Downstream Rock Fish Passage Alternative with Whitewater Features. This would allow for reduced construction costs associated with

construction dewatering, volumes of materials purchased, and construction mobilization. If funding were not available in time to keep the fish passage construction on schedule, Reclamation would construct the Downstream Rock Fish Passage Alternative.

Recreational interests and the Town of Palisade predict an economic benefit to the local economy from the construction of the whitewater features. Whitewater features would attract visitors and potential future construction of a “Whitewater Park” would increase tourism and support local businesses. Both construction of the whitewater features and the future “Whitewater Park” are contingent on the Town of Palisade obtaining public access below the dam from the Union Pacific Railroad and E.R. Jacobson.

Dam Removal: Reclamation estimates the cost for dam removal to be between \$1,900,000 and \$2,900,000 depending on mitigation costs associated with the Ute Water pump plant. No long-term operation and maintenance costs are anticipated.

This alternative would provide the most natural conditions for the migratory fish, provides boating opportunities, could increase tourism, and is the least costly alternative. However, this alternative has the greatest effect on upstream uses, hydropower generation, water rights, and potential liability exposure due to landslide, channel scour and water supply concerns.

Additional Discussion of Conventional and Downstream Fish Passage Alternatives: From a public safety and cost perspective, it is more appropriate to compare the Conventional Fish Ladder alternative with the addition of a rock-filled wedge on the downstream face of the dam to the Downstream Rock Fish Passage alternative. This comparison results in very similar costs and provides an equivalent level of public safety. Reclamation does not believe there is a high probability of recreational boaters attempting to boat over the Price-Stubb Diversion Dam under current conditions because it is a known drowning hazard. However, if Reclamation attempted to construct only the rock fish passage channel without the adjacent riprap ramp, it is likely that some boaters may attempt to float the passage channel. There is then an increased possibility that boaters may miss the fish passage channel and then be exposed to the life-threatening drop of the dam face.

Cumulative Impacts

Cumulative impacts are impacts on the environment, which result from the incremental impact of the action, when added to other past, present, and reasonably foreseeable future actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

For purposes of this analysis, cumulative impacts are focused on existing and future Recovery Program actions, a proposed whitewater park, and the Jacobson Hydro No. 1 Project.

Recovery Program actions include the Grand Valley Irrigation Company Diversion Dam Fish Passage, Grand Valley Canal Fish Screen, Grand Valley Project Diversion Dam Fish Passage, Government Highline Canal Fish Screen, and Grand Valley Water Management. When restored fish passage at the Price-Stubb Diversion Dam Fish is added, cumulative impacts to the Colorado River endangered fish is beneficial. The Grand Valley Project Diversion Dam Fish Passage relies on restored fish passage at the Price-Stubb Diversion Dam to provide connection to 50+ miles of upstream critical habitat for the endangered fishes. Federal, state and private water users rely on the Recovery Program to serve as the reasonable and prudent alternative to avoid jeopardy to the Colorado River endangered fishes for historic and future water diversions and depletions. A jeopardy determination from the Service would negatively impact all water users within the Upper Colorado River Basin.

The Town of Palisade submitted an application to Great Outdoors Colorado for incremental costs associated with construction of the Downstream Rock Fish Passage with Whitewater Features Alternative. If funding and proper authorization is obtained from CDOT, E.R. Jacobson, Union Pacific Railroad, and Palisade and Mesa County Irrigation Districts, the whitewater features would be constructed. If funding were not obtained in time to construct the whitewater features in conjunction with the fish passage, whitewater features would not necessarily be precluded, but would require additional funds for their construction because of additional costs for construction dewatering, mobilization, etc. Construction of whitewater features separate from fish passage would require additional dewatering of a portion of the Colorado River, which may cause additional impacts to endangered fish and affect water quality. As discussed earlier whitewater features would likely attract boaters that may result in a minor impact to riparian resources from unauthorized boater access to the Colorado River. In addition, whitewater features could increase safety hazards on Interstate 70 if vehicles illegally stop or park within the Interstate 70 right-of-way. If the Union Pacific Railroad and E.R. Jacobson granted public access below the dam, this safety hazard would be reduced.

Construction of a future whitewater park would be contingent on the Town of Palisade obtaining additional funding. Additional site disturbances from road improvements, developed parking areas and public restrooms would likely occur. The potential for unauthorized river access upstream of the Price-Stubb Diversion Dam and from Interstate 70 would likely decrease. Riparian resources would also benefit from defined use areas and trails.

Summary and Mitigation Measures

In summary, the primary effect of fish passage alternatives would be to allow endangered fish to migrate into upstream habitats and assist in the recovery of the endangered Colorado River fishes. Each fish passage alternative was designed and would be operated to avoid impacts or harm to existing uses, water users, and water rights. Construction impacts would be minor and temporary. Table 2 summarizes and compares impacts among alternatives for each issue discussed in this chapter.

Mitigation Measures:

1. Clifton Water District would be advised of the construction schedule for the selected alternative. If the dam is removed, Clifton Water would be advised of the composition and volume of sediments that would be released, and when the sediments would reach their diversion and treatment plant.
2. Permission from all affected land owners would be obtained before commencing any construction activities. Removal of the Price-Stubb Diversion Dam would require approval of the dam owners.
3. Reclamation and/or construction contractors would obtain Clean Water Act authorizations before construction. Permit conditions would be incorporated as environmental commitments.
4. Modification of the historic Price-Stubb Diversion Dam would occur concurrent with measures to avoid or minimize adverse effects. Reclamation executed an MOU with the Colorado SHPO that requires Reclamation to take photographs that meet agreed-upon standards for architectural and engineers records. Reclamation would also collect historical documentation, drawings, and photographs of the dam and prepare a report for the Colorado SHPO archives.
5. Construction contracts would avoid activities that may affect fish spawning and larval fish development. Contracts would also require work to stop if activities affect any federally listed species or if cultural resources are discovered. Consultation with the Service or SHPO would be initiated, as appropriate, and mitigation measures implemented before construction activities could resume.
6. Costs for providing fish passage would be funded by the Upper Colorado River Basin Endangered Fish Recovery Program. Additional costs for constructing whitewater features would be funded with outside funding, if available. Reclamation would coordinate fish passage construction with affected land owners and recreational boating groups (i.e. CDOT, Union Pacific Railroad, E.R. Jacobson, WATER and Town of Palisade).
7. The following conditions would be met before construction of the whitewater features could proceed: 1) securing non-recovery program funds for the incremental costs associated with the Downstream Rock Fish Passage with Whitewater Features Alternative, 2) obtaining the necessary permits from underlying land owners (Palisade and Mesa County Irrigation Districts, E.R. Jacobson, and CDOT), 3) the Town of Palisade assuming liability and maintenance responsibility for the whitewater features, and 4) the Town of Palisade obtaining public access below the dam from the Union Pacific Railroad and E.R. Jacobson.

Table 2-Summary Comparison of Alternatives

Issue	No Action	Conventional Ladder	Downstream Rock Fish Passage	Downstream Rock Fish Passage w/ Whitewater Features	Dam Removal
Ute Water Plant	0	0	0	0	---
Water Rights	0	0	0	0	--
Clifton Water Treatment ¹	0	-	-	-	-
Recreation	-	-	-	+++	+++
Public Safety	-	-	+	++	++
Interstate 70	0	0	0	-	--
Railroad & Landslide Stability	0	0	0	0	---
Ownership of Dam & Lands ²	0	-	-	-	-
Floodplain & Wetlands ³	0	-	-	-	-
Endangered Fish Recovery ⁵	---	+	++	++	+++
Protect Historic Dam ⁴	0	-	--	--	---
Indian Trust Assets	0	0	0	0	0
Environmental Justice	0	0	0	0	0
Private Hydropower Revenues	0	-	-	-	---
Construction Costs	n/a	\$4.3 M	\$4.8 M	\$5.4* M	\$1.9—\$2.9 M
Long-Term Operation and Maintenance Costs	n/a	\$0.4 M	n/a	n/a	n/a
Estimated Cost	n/a	\$4.7 M	\$4.8 M	\$5.4* M	\$1.9—\$2.9 M

*Includes additional non-Recovery Program funding for whitewater features.

Scale of Potential Impacts

- +++ greatest positive impact
- + some positive impact
- 0 no known impact
- some negative impact
- greatest negative impact

Footnotes: Numbers with Table 2 (e.g. ¹) correspond to the associated mitigation measures listed on pages 54-55

CHAPTER 4—CONSULTATION AND COORDINATION

Plan Formulation and Public Scoping Activities

Plans for providing fish passage at the Price-Stubb Diversion Dam have been under development for many years. Initially, the primary participants in the planning process were the Recovery Program agencies and water users. Since 1993, Reclamation staff have formally and informally discussed with water users and land owners, the need to provide fish passage and associated concerns at the Price-Stubb Diversion Dam.

In July 1998, four letters were received from organizations urging an alternative in addition to the Conventional Fish Ladder and Dam Removal Alternatives (Rocky Mountain Canoe Club, Western Association to Enjoy Rivers, Colorado Association of Paddle Racers, and American Whitewater). They suggested construction of a fish ladder channel that would also accommodate river craft such as rafts, kayaks and canoes. Two similar letters were received from individuals; one suggesting a race course for kayaks and canoes. In October 1998, Reclamation staff met with representatives of these organizations and local boating enthusiasts to discuss options and issues plus costs that could be involved.

In December 1998, letters were mailed to 83 agencies, individuals, and organizations who could potentially be affected by a fish passage at the Price-Stubb Diversion Dam or who could be expected to have relevant information on the project. The letters announced Reclamation's intention to prepare a Draft Environmental Assessment, described the conventional fish ladder and dam removal alternatives, and requested comments and concerns about the project.

Reclamation announced the project in a December 15, 1998 news release that resulted in articles on the subject appearing in several western Colorado newspapers. Also in December 1998, American Rivers, a national conservation organization with more than 20,000 members, posted information about the fish passage project on their Internet web page.

More than 100 individuals and organizations provided written comments. Eighty-three of those responding did so via electronic mail. Comments were received from 53 individuals and organizations within Colorado, 36 from outside the state, and 23 who did not provide their mailing address or location. Concerns ranged from "do nothing" to suggesting construction of a whitewater park. Most encouraged dam removal, citing various benefits such as providing a more natural environment for the fish, improving river recreation, and costing less than building a fish ladder around the dam. The dam's safety hazard to boaters and the need for more recreational access were mentioned frequently. Many expressed disappointment that an alternative to create a

whitewater park was not included in the scoping document. Comment summaries were included in the April 1999 Draft EA.

A Draft EA was distributed for public comment on April 30, 1999. The 1999 Draft EA evaluated fish passage alternatives including partially removing the dam or constructing a fish ladder around the dam. The identified preferred alternative was dam removal. Reclamation received 22 comments on the 1999 Draft EA.

In an October 1999 newsletter which provided an update on the Upper Colorado River fish passages, Reclamation announced it was waiting for FERC's decision on the Jacobson Hydro No. 1 Project amended license application before resuming planning for fish passage at the Price-Stubb Diversion Dam.

As a result of comments on the draft EA, Reclamation formulated a Downstream Rock Fish Passage Alternative, which attempted to more fully address issues and concerns while meeting the underlying purpose and need for the project. A supplemental Draft EA was prepared and distributed for public comment in July 2002. Six comments were received on the 2002 Draft EA from organizations and private individuals. The majority of the comments received supported the Downstream Rock Fish Passage concept. Recreational interests supported the Downstream Rock Fish Passage alternative and requested that Reclamation consider additional features to enhance boater recreation. The Colorado River Energy Distributors Association (CREDA) expressed concerns with allowing non-native fish upstream of the Price-Stubb Diversion Dam. Copies of comment letters are included in the appendices.

The Recovery Program's Biology Committee discussed CREDA's concerns and directed Reclamation to examine the feasibility of incorporating selective passage into the Downstream Rock Fish Passage Alternative. Reclamation examined incorporating selective passage into this alternative and determined that it was not feasible because of the limited area between the Interstate and the River. Because direct access from Interstate 70 was not an available option, selective passage would require considerable fill and riprap along the left riverbank to build an access road from the Palisade off-ramp to the Price-Stubb Diversion Dam and the cost was estimated at an additional \$1,500,000. In addition, the access road would be in conflict with future Interstate 70 widening. The Recovery Program determined that selective fish passage at Price-Stubb was not feasible and elected to install selective fish passage upstream at the Grand Valley Project Diversion Dam.

Additional meetings were held between Reclamation and the Colorado Department of Transportation to discuss the proposed action. CDOT expressed concerns with the Downstream Rock Fish Passage alternative. CDOT identified two main issues: 1) future Interstate widening, and 2) trespass and liability issues associated with recreational boating at the Price-Stubb Diversion Dam. Reclamation addressed future Interstate widening concerns by offsetting the fish passage an additional 33 feet from the Interstate. CDOT requested that Reclamation conduct additional NEPA analysis on impacts

associated with the proposed whitewater features. A copy of CDOT letter is also included in the appendices.

Reclamation also met on several occasions with CDOT, Town of Palisade, recreational interests, E.R. Jacobson, and Palisade and Mesa County Irrigation Districts to refine the Downstream Rock Fish Passage alternative. As a result, Reclamation developed the Downstream Rock Fish Passage with Whitewater Recreation Features Alternative analyzed in the final EA.

In addition, the following individuals and organizations were contacted directly to obtain information for preparation of the environmental assessment:

Mesa County Irrigation District
Palisade Irrigation District
Ute Water Conservancy District
Grand Valley Water Users Associate
Orchard Mesa Irrigation District
Union Pacific Railroad
Colorado Department of Transportation
Federal Highways Administration
U.S. Fish and Wildlife Service
U.S. Army Corp of Engineers
Bureau of Land Management
Colorado State Historic Preservation Officer
Clifton Water District
Federal Energy Regulatory Commission
E.R. Jacobson
Gary Lacy, Recreation Engineering and Planning
Pete Atkinson, Whitewater West
Pete Winn, Western Association to Enjoy Rivers
Bob Cron, Colorado Riverfront Commission
Mesa County
Town of Palisade

Public Comment of Revised Supplement Draft EA

Reclamation distributed the Revised Supplemental Draft EA for public review and comment in April 2004. A total of 32 written comments were received from agencies, organizations, and individuals. Provided below is a summary of comments received and Reclamation's responses. Where appropriate, changes were made and incorporated into the Final Environmental Assessment.

May 19, 2004 Email from Leslie James, Colorado River Energy Distributors Association

Comment: "State" should be "States" on your cover page.

Response: Corrected, thanks.

May 25, 2004 Email from J. Rick Morgan, D.O.

Comment Summary: Please approve public access, play park option as the best option for community enhancement and future growth.

Response: Under Reclamation’s preferred alternative, the Town of Palisade would obtain downstream public access to the whitewater features.

May 26, 2004 Email from Karen Hensley

Comment Summary: Supports having a fish ladder with whitewater recreation features, and a park on the Colorado River near Palisade.

Response: No response necessary.

May 28, 2004 Letter from Aida Parkinson

Comment Summary: “...pleased that the Bureau has considered whitewater recreation to be an important use of the project area, and has accounted for boater safety and recreational opportunities as well as endangered fishes...However, if I had to choose between whitewater recreation and protection of endangered fishes, the fish are more important to me. Had fish and other aquatic resources been given equal consideration with water supply, power generation, and large storage reservoirs over the past 100 years, the fish would not be endangered and there would be less demand to create artificial whitewater facilities such as whitewater parks...I encourage the Bureau to support the whitewater community in its pursuit of appropriate whitewater opportunities and facilities, and to work with CDOT to provide safe and legal access to Colorado River.”

Response: No response necessary.

May 31, 2004 Email from Rita Crumpton, Orchard Mesa Irrigation District

Comment 1: “We note in the Draft EA the discussion relative to scour and velocities in the river and the possible changes that may occur in four of the five alternatives. Although the Bureau of Reclamation is convinced that no scour or velocity changes will affect the siphon, we feel it necessary to be on the record as concerned that the four-foot cover over the siphon may be affected, to our detriment. If that cover is lessened, the siphon will float, causing untold problems and damages to our landowners/irrigators. We would ask for assurance that, were that to occur, the Recovery Program and/or the Bureau of Reclamation would assume responsibility for repairs and costs associated with those repairs, as well as damages to our landowners and their lands and/or crops.”

Response 1: Reclamation’s hydraulic analysis concluded that with exception of the dam removal alternative, the remaining alternatives would have no effect the Colorado River

siphon. The preferred alternative will fill in an existing scour hole below the Price-Stubb Dam and stabilize the privately owned dam, which reduces the likelihood of dam failure and provides additional protection to the Colorado River siphon.

Comment 2: “Although we do not have a point of diversion below the Price-Stubb Diversion Dam, we do have a “check back channel” located downstream from the Price-Stubb and across the river (river left) from the Grand Valley Irrigation Company’s diversion. We have some safety concerns if Alternative 4 is selected, relative to whitewater rafters coming into the check channel and being injured by being thrown up against our check gates. We understand that the rafters should be exiting the river before they reach our location; however, we also know that may not always occur. Our safety concerns should be noted if that is the alternative selected.

Response 2: Additional discussion was added to the Recreation and Public Safety sections to include the check channel.

June 1, 2004 Letter from Frank Bering

Comment Summary: Supports the Price Stubb Water Park. The Price-Stubb site offers water flows adequate to host national competitions, international events, and recreation for Colorado boaters year around. It can become one of the premier facilities in the U.S.

Response: No response necessary.

June 1, 2004 Email from Barbara Bernhardt

Comment Summary: Supports the alternative that includes the provisions of whitewater features along with an in-channel fish ladder at the Price-Stubb dam. “I also understand that CDOT is a bit leery of such a feature adjacent to the freeway, but it seems that miles of recreational whitewater along the I-70 corridor in Glenwood Canyon have existed for years without undue safety mishaps, so it seems that this short stretch of similar use would have no different effect.

Response: No response necessary.

June 1, 2004 Email from Time Boyle

Comment Summary: Supports the downstream rock fish passage alternative with whitewater recreational features at the Price-Stubb Diversion Dam.

Response: No response necessary.

June 2, 2004 Letter from William Taggart, McLaughlin Water Engineers

Comment 1: “We believe that the alternative “Downstream Rock Fish Passage with Whitewater Recreation Features” is the best alternative of those presented. It will benefit the environment, the fishery, the condition of the dam, enhance safety, provide for boating recreation, and by far is the highest socio-economic benefit.”

Response 1: No response necessary.

Comment 2: “Basically, a whitewater bypass stream is feasible, within the slope specified and the length allowed. We make this statement based on our experience with similar facilities and review of the site conditions. Key details, coordination with your proposal, boating flow range, and other important facilities and provisions need to be explored further, which may be undertaken in subsequent efforts.”

Response 2: A preliminary design for whitewater features was incorporated into the FEA.

Comment 3: “Because of the vertical drop through the reach and length of potential whitewater downstream to the I-70 bridges, this site has extraordinary potential for whitewater boating on a regional and national basis. The Colorado River has flow that would make boating possible when most other rivers have dried up. The site offers near year round whitewater, and socio-economic opportunity for the Grand Valley.”

Response 4: Water available for the whitewater features would be subject to water needs of the fish passage, the proposed Jacobson Hydro No. 1 Project, and Ute Water. There may be times when water is not available for whitewater recreation. As stated in EA, Mr. Jacobson has stated that he is willing to make water available during weekends and holidays for whitewater recreation if the hydropower facility is built.

Comment 5: “River dam remodeling and river restoration projects routinely provide for boating and river recreation. A “cost of doing business” for this fishery project should be to implement features for safe boating and river recreation.”

Response 5: This issue and the Recovery Program’s position are adequately discussed in the EA.

Comment 6: “The dam as it exists, and any alternatives that have a steep sloping face and/or conventional “hydraulic jumps” or “keepers” in boater vernacular, have extreme safety problems. We don’t believe the existing dam is likely to remain stable, given the scour hole that has developed and the degrading streambed below.”

Response 6: The Downstream Rock Fish Passage and Downstream Rock Fish Passage with Whitewater Features Alternatives include filling the scour hole below the dam and stabilizing the dam with riprap material.

Comment 7: “The fish passage as devised is a singular purpose component, which as indicated in the EA could be hazardous to boating. We have included joint fish and boating passage capability into most of our facilities with success. A combined facility would provide for lower fish passage velocities and increase habitat. This performance can readily demonstrated by existing facilities, hydraulic physical models and numerical 3-d modeling. As presently devised the whitewater and fish passage components compete for water, have conflicts which can be avoided or further minimized, and don’t achieve the best economics and benefits, in our opinion.”

Response 7: Without the fish passage project, whitewater recreation at the dam would be infeasible. Reclamation has attempted to provide opportunities for whitewater recreation and address existing safety issues associated with the privately owned diversion dam. The preferred alternative attempts to achieve the best economics and benefits while ensuring fish passage for endangered fish.

Comment 8: Since no detailed analytical and design work for the whitewater passage has been conducted, the plan of action should allow reasonable time and funding to pursue a better coordinated project. This statement should not be construed to imply that the project with whitewater features is not feasible, but there are important issues, including developing a better opinion of the project costs with whitewater facilities. Additional time would allow for funding efforts.”

Response 8: Reclamation has provided considerable time to coordinate and address issues related to fish passage at the Price-Stubb Diversion Dam as shown by the preparation of draft environmental assessments in 1999, 2002, and 2004. Construction of the fish passage will need to be completed in 2006 to maintain Recovery Program sufficient progress. Detailed analytical and design work for Reclamation’s portion of the Downstream Rock Fish Passage with Whitewater Features Alternative has been completed as described in the environmental assessment. W.A.T.E.R has contracted Recreation Engineering and Planning Consultants to work directly with Reclamation on additional design work for the whitewater features.

Comment 9: “Somewhat like CDOT, we have concerns about site access and safety. However we don’t think this concern should be used to eliminate boating. Boating is popular and active along most of our highways and can be reasonably managed. We believe safe access directly to the west (right) bank, portage, and emergency provisions must be included. Highway safety and provision for future transportation needs should be included, which we believe has been incorporated. The best action regarding right of way would be for the river and west bank to be owned by the local governmental sponsor.

Response 9: Addressed in the FEA.

Comment 10: “The Hydro Power key details should be explored, such that the fishery and people are provided for. The concept of using the old head gates and intakes hazardous to fish or boaters, is not valid in our view.”

Response 10: The Federal Energy Regulatory Commission (FERC) is the agency with jurisdiction over permitting private hydropower facilities. Issues concerning the proposed hydropower facility should be directed to Eric Jacobson and FERC.

June 3, 2004 Letter from Susan Grabler, Union Pacific Railroad

Comment 1: “As we understand it, this alternative would require public access on/across UPRR property. This is an unacceptable alternative for UPRR. Any public access across any track in the State of Colorado is under the authority of the Colorado Public Utility Commission (PUC). The PUC has sole authority to either grant or deny public access across railroads in CO. UPRR will not grant public access across any proposed or existing private road crossings.”

Response: Reclamation’s proposed action includes the Town of Palisade obtaining public access on or across Union Pacific Railroad property. The proposed access would not cross the railroad tracks, but would use an existing road parallel to the railroad tracks on property owned by Union Pacific Railroad and E.R. Jacobson. If public access is not obtained, Reclamation will construct the downstream rock fish passage alternative.

Comment 2: “In locations throughout the United States, railroads have had serious concerns and issues with public access to rivers, and lakes across active railroad tracks. We believe your preferred alternative will encourage trespassing on UPRR property and we find this unacceptable.”

Response 2: The Town of Palisade is currently working with the Union Pacific Railroad to address issues and concerns with using the existing road within the railroad right-of-way. The existing road parallels the railroad tracks and does not cross them. Controlling access to gates, fencing, and signage have been discussed to discourage trespass and address safety issues.

June 4, 2004 Letter from Jack Stephens

Comment Summary: “...I prefer the downstream rock fish passage with whitewater features, if that’s not possible my next choice would be the downstream rock fish passage. The only alternative I am opposed to is the “no action” choice. I think we should try our best to save the endangered fish...”

Response: No response necessary

June 5, 2004 Email from John Dalton

Comment 1: “I think the Whitewater Park is an excellent idea that will benefit everyone in the Grand Valley.....”

Response 1: No response necessary.

Comment 2: “The representative from CDOT discussed a need to spend about \$35,000 to \$40,000 on raising the barrier adjacent to the road so that drivers will not notice the whitewater activities. I am not sure that is something we should be worrying about. Every time I drive Glenwood Canyon I see rafts and kayaks from the road. There are lots of tight turns on that section of highway and there seems to be no problem with accidents. I personally believe a raised barrier for the Price-Stubb’s turn is not necessary.”

Response 2: Additional screening may be a CDOT requirement for approval to construct whitewater features to address safety issues associated with I-70.

Comment 3: “The present plan proposes two separate channels, one for fish and one for the Whitewater Park. I fail to see the logic in this... When I suggest a single passage ladder at the meeting I was told that it wouldn’t work because the water would be too fast and these are low speed fish... How do fish get past all the rapids during migrations? A whitewater park mimics a rapid with natural river features. These endangered fish have survived thousands of years going up and down rapids...”

Response 3: The Service has stated that they do not have significant concerns with boaters using the fish passage affecting endangered fish. Rather, site restrictions including of water uses (i.e. hydropower, Ute Pumping Plant), close proximity to railroad and Interstate 70 to the river channel, costs, and the swimming capabilities of the endangered fish are factors that make a single passage for fish and boaters infeasible. Colorado pikeminnow are strong swimmers and could possibly navigate a boat passage. Razorback sucker are weak swimmers and would have difficulty navigating the higher velocities associated with the boat passage.

June 6, 2004 Letter from Kayla Davidson

Comment Summary: “We are very in favor of a fish ladder with a boating passage or whitewater alternative. It seems highly practical to have a recreational benefit that will in no way harm the environment and yet could provide important economic benefits for the community.”

Response: No response necessary.

June 8, 2004 Letter from Don Lindmark

Comment Summary: “...a recreational, fish ladder, water storage and hydroelectric dam would be a win-win situation....I believe that all concerns brought up can be economically addressed....Recreation access can be from Island Acres to Corn Lake with a pedestrian path around the dam for kayak use...Plugs to maintain minimum storage can be added. Even screening can be put in place on the freeway to prevent distraction of motorists...”

Response: No response necessary.

June 8, 2004 Letter from William and Susan Cowles

Comment Summary: “enthusiastically support and endorse both the fish ladder construction with the whitewater recreation features....The project will enhance our valley’s attractiveness, encourage tourist spending, and provide a healthy exciting activity for our youth...In Glenwood Canyon-the RR, highway and local town have worked out agreements to coexist with whitewater activities-we too can and need to. A safe way to provide parking, access, trails, etc. certainly can be accomplished and we’re will to volunteer to help.”

Response: No comment necessary.

June 14 Email from Nathan Chapman

Comment Summary: “...would like to add my support of the idea to add a kayaker’s park at the same time...it would greatly enhance the river there, as well as bringing resources to the town of Palisade and nearby...Parks in Golden, Boulder, Steamboat Springs and Lyons are all great additions to an already picturesque lifestyle...I would suggest facilities should be provided, to maintain sanitary conditions.”

Response: Restroom facilities would not be included in Reclamation’s proposed action. The Town of Palisade would provide future facilities as funding became available. During large whitewater events, porta-potty facilities could be provided to address sanitary conditions until permanent facilities are constructed.

June 14, 2004 Email from Derek Day

Comment Summary: Supports the Whitewater Park. “This would help the economy of Palisade and I think remove some of the boating pressure on Westwater canyon.”

Response: No response necessary.

June 14, 2004 Email from Chris Menges

Comment Summary: “...would like to voice support of the Whitewater Park proposal for the Colorado River near Palisade. I also support the in-stream fish ladder. Whitewater parks greatly improve recreational opportunities and have proven to generate positive economic and social impacts on many other towns and counties in Colorado and in other States.”

Response: No response necessary.

June 15, 2004 Email from Ronald Hamblin

Comment Summary: “...would really like to see a kayak park along with the fish ladder. Now I have to drive to Glenwood Springs (4 hrs.), Green River, Wyoming (6 hrs.), or Reno, Nevada (10 hrs.) to play on a good wave. I’d spend a lot of time and gas money there.”

Response: No response necessary.

June 15, 2004 Email from Tim Walker

Comment Summary: “...fully support the combination of functions into one plan...”

Response: No response necessary.

June 15, 2004 Email from Susie Attaway

Comment: “...Downstream Rock Fish Passage with Whitewater Recreation Features. This new proposal would address safety issues regarding drowning hazard that are currently in place with the existing dam. It would enhance the fish passage that is necessary to protect endangered fish species; it would improve and beautify the current entrance into the Grand Valley east corridor near Palisade. In essence, an opportunity to do a number of positive things in one project is present and should go forth.”

Response: No response necessary.

June 15, 2004 Email from Don Bettina

Comment: “We have vacationed in Colorado extensively in the past and worked on the Arkansas in ’95. A feature like this would definitely be a plus to our return. It would be an excuse to stay some extra time with the additional whitewater recreation that it would provide.”

Response: No response necessary.

July 15, 2004 Letter from Pete Atkinson, Whitewater West

Comment 1: “I strongly support the Preferred Alternative which has been identified as “Downstream Rock Fish Passage with Whitewater Recreational Features”. I believe this alternative will address the needs and concerns of all parties with interests in the Price-Stubbs Dam. The opportunity to create whitewater features will be of great benefit to the local economy of neighboring communities for years to come.

Response 1: No response necessary.

Comment 2: “I believe the preferred alternative maximizes benefits for the taxpayer by creating a facility that achieves the goals of the fish recovery program and creates recreation opportunities. The preferred alternative also removes a significant hazard to

boaters and at the same time returns the river to a more natural state. The preferred alternative is admirable example of cooperation between federal agencies, local government, private businesses, and the general public.”

Response 2: No response necessary.

June 15, 2004 Email from Ed Hansen

Comment: “hope you decide to create the Whitewater Park beside the fish ladder...”

Response: No response necessary.

June 16, 2004 Email from Frank Bering

Comment: “Price-Stubb is a World Class site for a whitewater park. I am a senior citizen and would use it often. International and National events could be held there as well as training for junior teams, Olympic teams, and all classes of kayakers. We may even be surprised that fish might make there way up the Whitewater Course as well as the fish ladder.”

Response: No response necessary.

June 17, 2004 Comment Letter from Bob Cron

Comment 1: “I support the preferred alternative—Downstream Rock Fish Passage with Whitewater Recreation Features. This alternative best resolves the various issues facing this project.”

Response 1: No response necessary.

Comment 2: “I recommend adding the following two provisions to this alternative: Providing for the emergency installation of flash boards in each dam cut if low water flows, at some time in the future, prevent Ute Water from making emergency domestic water extractions at their facility just upstream. In design, provide for water rescue attachments for use by the Sheriff. These should be provided whether or not the Whitewater Park is constructed.”

Response 2: Provisions for stop-logs to address Ute Water’s concerns and water rescue attachments will be incorporated into the fish passage final designs.

Comment 3: “Page 5. River Boating. I recommend the last sentence read “This Draft EA evaluates potential impacts associated with whitewater recreational features designed to enhance river recreation opportunities”. The EA does not evaluate impacts from actions by CDOT.

Response 3: The sentence was changed in the Final EA. Thanks for the comment.

Comment 4: “Page 17. Last paragraph. I believe a 2.5% rock fill would address public recreation safety concerns. I have rafted actively for 10+ years on many rivers in the west and several in the east. Short stretches of 2.5% gradient are common on many rivers and are routinely negotiated by rafters and kayakers.”

Response 4: No response necessary.

Comment 5: “Page 24. Third paragraph. Second sentence. The latest population information I received from Mesa County in 2002 was 120,000.

Response 5: Population information was updated in the Final EA.

June 17, 2004 Letter from Larry W. Clever, Ute Water Conservancy District

Comment 1: Maintenance of the current minimum water level on the upstream side of the dam is critical to the operations of the Ute Water pump station. Ute Water cannot see any lowering of that water level.

Response 1: To address Ute Water’s concern, stop-log channels will be incorporated into the final design for the fish passage and boater notch.

Comment 2: Current plans call for the cutting of at least one notch and two notches with the whitewater portion of the project. If these will change the water level Ute must have the ability and the right to put stop logs in the notches whenever required.

Response 2: Addressed in Response 1.

Comment 3: Current plans run the whitewater users on the side of the river next to the pump station. Ute Water does not feel that this is a safe situation.

Response 3: Current plans would run whitewater users to river-right where the second notch would be. The conceptual plan shows a barrier across the fish passage entrance to keep boaters from entering the fish passage. A portage trail around the dam on river-left (CDOT property) would provide access for emergencies.

Comment 4: The location is not a spectator friendly area. There is very limited access and no spectator areas. This means that spectators and participants will seek to use the pump station, interstate and highway bridge as viewing areas.

Response 4: The Town of Palisade would obtain public access to the E.R. Jacobson property on river-right downstream of the Price-Stubbs Diversion Dam. The area is of adequate size to accommodate spectators if public access is granted to the Town by the Union Pacific Railroad.

Comment 5: Parking areas within the area are extremely limited. How will parking restrictions be enforced and by whom?

Response 5: There is adequate area for parking available on the E.R. Jacobson property for normal daily use of the whitewater features. It may be necessary to provide off-site parking for larger events and shuttling spectators to the Jacobson property dependent on the event turn out. Parking restrictions and trespass will be enforced by the Town of Palisade through an agreement with Mesa County.

Comment 6: Who will indemnify Ute Water in any lawsuits filed because of the whitewater activity?

Response 6: The local governmental sponsor (Town of Palisade) would assume liability for activities associated with the whitewater features. A local governmental sponsor was required to request Great Outdoors Colorado funding.

Comment 7: Who will pay any increased insurance costs because of the whitewater activity?

Response 7: Addressed in Response 6.

June 18, 2004 Letter from Tamara Smith, Colorado Department of Transportation

Comment 1: “CDOT has concerns that the Bureau of Reclamation RSDEA contains incorrect information regarding right-of-way (ROW) ownership and access issues and also does not adequately analyze the impacts associated with the preferred alternative-Downstream Rock Fish Passage with Whitewater Features. The ownership map located on page 42 of the document (Figure 13) contains incorrect land ownership information in the area downstream of the dam. This information should be corrected to show correct legal ownership and contiguous I-70 R.O.W.”

Response 1: Figure 13 shows recorded legal land ownership as documented in Mesa County. There are no recorded documents that show CDOT ownership in the area identified other than what is shown in Figure 13. Reclamation has requested legally recorded documentation from CDOT regarding this issue; however Reclamation has not been provided this information. The FEA was changed to state that CDOT exercises authority within the project area.

Comment 2: “It is indicated in several places in the RSDEA that access to the site would be from Highway 6 along and existing trail that lies within the railroad right-of-way and through CDOT property downstream from the dam. Presently, access is from the County Road along a gated trail that lies within the railroad right-of-way and through E.R. Jacobson’s property. Permission to grant construction or permanent access using this trail would need to be obtained from the Union Pacific Railroad and E.R. Jacobson, not CDOT. The RSDEA does not indicate if the UPRR has been contacted and if permission has or has not been granted for construction or public recreation access.”

Response 2: The access description was revised in the FEA. Reclamation is working with the Union Pacific Railroad to obtain temporary construction access. The Town of

Palisade has requested permanent public access through the Railroad right-of-way. One of the conditions of constructing the whitewater features is for the Town of Palisade to obtain public access prior to construction.

Comment 3. “The RSDEA also states “construction staging and material storage would be on adjacent vacant lands owned by E.R Jacobson and CDOT.” CDOT does not allow construction staging or stockpile of material on their property that located within 100 feet of any riparian area or within the 100-year floodplain.”

Response 3: Reclamation would comply with any such conditions imposed by CDOT included in the temporary construction access permit and permission to build the fish passage structure.

Comment 4: “CDOT feels the RSDEA does not adequately define the whitewater recreation features portion of the preferred alternative, Downstream Rock Fish Passage with Whitewater Recreation Features. The RSDEA indicates that the recreation features would include constructing a second notch in the Price-Stubb Diversion Dam for rafts and kayaks, and strategically placed boulders to create desired whitewater conditions on a 550 foot-long downstream rock ramp. The EA does not indicated the size of second notch in the dam or the size, amount and location of boulders and thus cannot adequately analyze the impacts of this alternative to I-70 or CDOT’s downstream structures. Evaluation of impacts of the preferred alternative must include an evaluation of all connected actions associated with the addition of whitewater features including boat put in and take out. The RSDEA does not analyze the impacts of construction of these required features.

Response 4: Reclamation has had additional discussion with CDOT regarding the Downstream Rock Fish Passage with Whitewater Recreation Features. Additional information, discussion and commitments were incorporated into the FEA to address CDOT concerns.

Comment 5: “The Public Safety issues have not been adequately addressed in the Supplemental draft EA. As it stands now, public access to the dam area on the river right is not provided and the existing trail is closed except for railroad and private utility use. The area around the dam consists of several high retaining walls, which pose a significant safety risk to the public. The area above the dam needed to gain access to the river is limited due to large structures and any access to the river above the dam would also have to go through railroad right-of-way. Encouraging and allowing public access to these areas poses significant public safety risks. No mitigation measures have been considered or provided to lessen the risk. The RSDEA does not discuss the public safety issue of additional public foot access in the area around the dam. In addition, the RSDEA did not address emergency service response or rescue features to be included as part of the preferred alternative.”

Response 5: Under Reclamation’s preferred alternative, the Town of Palisade would obtain public access to the whitewater features. Additional discussion was added to the FEA to address CDOT’s concerns.

Comment 6: “The issues pertaining to the maintenance and liability associated with the recreational features have not been adequately addressed in the RSDEA. On Page 19, the RSDEA states that “recreational interests and possibly the Town of Palisade would provide maintenance, as needed, for the whitewater features including but not limited to removing trash and debris, and adjusting and/or resetting boulders after large flow events”. CDOT can only enter into intergovernmental agreements with other governmental agencies and in this case the other governmental agency must assume maintenance and liability responsibility.”

Response 6: A local governmental agency sponsor (Town of Palisade) would be required for Reclamation to construct the Downstream Rock Fish Passage with Whitewater Recreation Features Alternative. As stated in the EA, without a local governmental sponsor, Reclamation would construct the Downstream Rock Fish Passage Alternative.

Comment 7: CDOT, in consultation with FHWA, believe that the RSDEA would be adequate for approval of a fish passage within I-70 R.O.W. with no whitewater features. The inclusion of whitewater features will require additional evaluation of impacts and mitigation for the issues described in our previous correspondence. CDOT supports removal of the dam hazard to boating with the inclusion of a 4:1 grouted riprap slope shown in the fish passage only alternative.

Response 7: The 4:1 grouted riprap slope included in the Downstream Rock Fish Passage Alternative does not remove the dam hazard to boating. Boats and kayaks would not be able to safely negotiate this steep slope. A defined portage around the dam would need to be established to allow boaters to legally use this stretch of the Colorado River. Additional discussions with CDOT resulted in the addition of an emergency portage around the dam on river-left.

June 18, 2004 Letter from Mark Gardner and Paul Jones, Riverfront Commission

Comment: We would like to express the support of the Colorado Riverfront Commission for the endangered fish passage at the Price-Stubb dam. In particular, the Commission endorses the Preferred Alternative described in the recent revised Environmental Assessment on the fish passage, the Downstream Rock Fish Passage with Whitewater Recreational Features Alternative...The Preferred Alternative is in concert with key elements of our founding mission in that it not only will increase the range of several endangered fish species , but will at the same time provide an important addition to the river’s recreational potential...We have collaborated with the partnership that is attempting to raise funds for construction of the water park at the fish passage and will continue in the effort to make the water park a reality...”

Response: No comment necessary.

June 18, 2004 Email from Pete Winn, Western Association to Enjoy Rivers

Comment 1: “We agree that the preferred alternative, in-channel fish passage with whitewater features, is the best alternative for these reasons in addition to those listed in the EA: 1) If the US Bureau of Reclamation is authorized to spend about \$4 million in taxpayer money on endangered fish, it really makes sense to let recreation users raise and additional 12% from private and lottery sources for their own benefit, 2) Over the past twenty or thirty years, the Grand Valley has produced some pretty talented boaters....3) Other cities have benefited economically from whitewater parks, and Palisade will also benefit...4) If the whitewater park is not built, the alternative will be a riprap ramp that could be hazardous, especially at high water. Some boaters will try to run it anyway, and for safety it’s much better to funnel the water into a channel with man made whitewater features that are designed to be safe at all river levels for a variety of skill levels, 5) The Bureau makes the distinction between a whitewater park, which requires land access on river right, and the downstream rock passage with whitewater recreational features, which only includes features in the river itself, and requires land access at Island Acres State Park about three miles upstream. They hint that a whitewater park is a good idea because if the Colorado Department of Transportation does not allow land access at the site, boater will be tempted to park along the freeway on river left to access the fish ladder, which is far more dangerous than allowing land access on river right. We strongly support land access on river right approach and believe it should be included in the construction plans.”

Response 1: As stated in the draft EA, Reclamation will request only temporary construction access to build the fish passage facility from the Union Pacific Railroad, CDOT and Eric Jacobson. The Town of Palisade would request public access along river right.

Comment 2: “If a whitewater park notch was cut in addition to the fish passage notch, the level of water in the pool one-half mile above the dam at low flows might be too low for the Ute Water emergency pump to operate properly. The Bureau’s studies indicate a drop of 2 to 3 inches at the dam would not significantly affect the water level at the Ute pump, and it offered to provide its documentation to Ute Water engineers for review”.

Response 2: Channels in the fish passage notch for stop-logs will be incorporated into final designs to address Ute Water’s concerns. If the whitewater features are also included, a second notch for boaters would require a gate or removable flashboards to ensure that the proposed Jacobson Hydro No. 1 hydropower plant would not be affected.

Comment 3: It will be necessary to obtain recreational easements from the five property owners to gain access on river right: the railroad, CDOT, Jacobson Hydro-West, and Palisade and Mesa County irrigation companies. Preliminary discussions indicate this is feasible.

Response 3: No comment.

Comment 4: It is inevitable that more people mean more trash, and a couple of Palisade residents are concerned about who will pay for trash clean-up. Also, parking and toilet facilities are related concerns. Having proper land access should mitigate these concerns. Increased tax revenues to the town of Palisade will more than compensate the Town for providing services at the Whitewater Park as part of their existing park program.

Response 4: Existing public river access points including Colorado River State Park-Island Acres, Palisade River Park, and Colorado River State Park-Corn Lake have adequate parking and facilities to accommodate the additional river use as proposed under the Downstream Rock Fish Passage Alternative with Whitewater Features. The concept of having national and international competitions at the site will not be feasible without public access and facilities below the Price-Stubb Diversion Dam. The Town of Palisade would need to address these issues prior to scheduling large scale events.

Comment 5: The recreation community does not yet have the \$400,000 estimated by the Bureau of engineering and construction. We intend to obtain it from a GOCO grant, which is not a certainty. However, other towns have been successful in using GOCO funds, and this project certainly qualifies, so we are optimistic that we will succeed.

Response 5: No response necessary.

June 21, 2004 Letter from Lee Bartlett, Region 10 League for Economic Assistance and Planning, Inc.

Comment Summary: "...recommend that the BOR select its preferred alternative-“Downstream Fish Passage with Whitewater Recreation Features” as the final alternative. The ability to turn the current structure into a wildlife/recreation friendly facility makes both economic and environmental sense. The whitewater facility will attract many recreational users from the Telluride, Ouray, Ridgway, Montrose, Delta, Grand Junction and Moab areas. Whitewater parks have proven time after time to be a valuable community asset.”

Response: No comment necessary.

June 22, 2004 Letter from Gregg Larsen, Union Pacific Railroad

Comment: “I am in receipt of your May 17, 2004 cover letter and Revised Supplemental Draft Environmental Assessment for the Price-Stubb Fish Passage. I would like to state for the record that the Union Pacific Railroad Company has legitimate safety concerns with the Plan proposed by the Bureau of Reclamation and will do everything in its power to fight its implementation. It is my understanding that as part of this Plan, the Bureau of Reclamation would also like to allow the use of the Railroad’s right-of-way as a point of access to a proposed whitewater park at the dam site. For safety reasons, the Railroad will not allow this type of use on its right-of-way. The proposed use by the Bureau

would bring a large number of vehicles and pedestrians in close proximity of the Railroad's main line track. Therefore, the Railroad must decline any request for public access along its right-of-way."

Response: Union Pacific Railroad concerns were discussed during a telephone conversation with Gregg Larsen on June 30, 2004. It is Reclamation's understanding that Union Pacific Railroad is supportive of fish passage efforts and may be willing to grant temporary construction access to Reclamation and permanent public access to the Town of Palisade if liability and safety issues are address and the Railroads maintenance access is not impaired. The Town of Palisade has submitted a request to the Union Pacific Railroad for public access along the existing access road. Public access would be needed to build the whitewater features. Otherwise Reclamation would construct the Downstream Fish Passage Alternative.

Consultation with other Agencies

Reclamation staff continues to informally coordinate and consult with the Service to comply with the Fish and Wildlife Coordination Act and the Endangered Species Act; the Army Corps of Engineers and the Colorado Water Quality Control Division to comply with requirements of the Clean Water Act; and the Colorado State Historic Preservation Officer and Federal Advisory Committee to comply with the National Historic Preservation Act. Agency review results were incorporated into the Final EA.

Distribution List

Appendix A contains the mailing list for the Final EA. The list includes all individuals, agencies, and organizations to which Reclamation sent scoping documents and previous draft EAs. In addition, others who have specifically requested a copy of the Draft EA are included on the list.

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APPENDIX A – DISTRIBUTION LIST

<u>ORGANIZATIONS</u>		
<u>Andrew Fahlund</u>	<u>American Rivers</u>	<u>Washington, DC</u>
<u>Matt Sicchio</u>	<u>American Rivers</u>	<u>Washington, DC</u>
--	<u>American Whitewater</u>	<u>Silver Spring, MD</u>
<u>Reeves Brown</u>	<u>Club 20</u>	<u>Grand Junction, CO</u>
<u>Bob and Jill Stecker</u>	<u>Colorado Association of Paddle Racers</u>	<u>Boulder, CO</u>
<u>Pete Kolbenschlag</u>	<u>Colorado Environmental Coalition</u>	<u>Grand Junction, CO</u>
<u>Mark Peterson</u>	<u>Colorado River Boat Association</u>	<u>Grand Junction, CO</u>
<u>Leslie James</u>	<u>Colorado River Energy Distributors Agency</u>	<u>Tempe, AZ</u>
<u>Bob Cron</u>	<u>Colorado Riverfront Commission</u>	<u>Grand Junction, CO</u>
<u>John Heideman</u>	<u>Colorado Riverfront Commission</u>	<u>Grand Junction, CO</u>
<u>Nathan Keverer</u>	<u>Dufford, Waldeck, Milburn & Krohn, L.L.P.</u>	<u>Grand Junction, CO</u>
<u>William Davis</u>	<u>Ecoplan Associations Inc.</u>	<u>Mesa, AZ</u>
--	<u>Grand Valley Audubon Society</u>	<u>Grand Junction, CO</u>
<u>Steve Glazer</u>	<u>High Country Citizens Alliance</u>	<u>Crested Butte, CO</u>
<u>Eric R. Jacobson</u>	<u>Hydro-West, Inc.</u>	<u>Telluride, CO</u>
--	<u>Mesa County Water Association</u>	<u>Grand Junction, CO</u>
<u>Don Glaser</u>	<u>National Fish and Wildlife Foundation</u>	<u>Commerce City, CO</u>
<u>Gary Lacy, P.E.</u>	<u>Recreation Engineering & Planning</u>	<u>Boulder, CO</u>
<u>Dennis Adams</u>	<u>Rocky Mountain Canoe Club</u>	<u>Grand Junction, CO</u>
<u>Vicky Mercer</u>	<u>Sierra Club, Uncompahgre Chapter</u>	<u>Palisade, CO</u>
<u>Pat Oglesby</u>	<u>Trout Unlimited, Grand Valley Anglers</u>	<u>Grand Junction, CO</u>
<u>Susan Grabler</u>	<u>Union Pacific Railroad</u>	<u>Denver, CO</u>
<u>Wayne Cook</u>	<u>Upper Colorado River Commission</u>	<u>Salt Lake City, UT</u>
<u>Pete Winn</u>	<u>Western Association To Enjoy Rivers</u>	<u>Grand Junction, CO</u>
<u>Tara Thompson</u>	<u>Western Slope Environmental Resource Council</u>	<u>Paonia, CO</u>
<u>Pete Atkinson</u>	<u>Whitewater West</u>	<u>Grand Junction, CO</u>
<u>Chuck Hogue</u>	<u>Xcel Energy</u>	<u>Palisade, CO</u>
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<u>Bart Allen, Grand Junction, CO</u>		
<u>Herman Allmaras, Palisade, CO</u>		
<u>Troy Baleria and Margaret Sardeval-Baleria, Grand Junction, CO</u>		
<u>Mr. & Mrs. Lawrence Beagley, Grand Junction, CO</u>		
<u>James B. Braden, Grand Junction, CO</u>		
<u>John Brennan, Durango, CO</u>		
<u>Shelby Coleman, Palisade, CO</u>		
<u>Adam Hackley, Grand Junction, CO</u>		
<u>Thelma R. Hays, Palisade, CO</u>		
<u>Denny Huffman, Grand Junction, CO</u>		
<u>Jay P.K. Kenney, Denver, CO</u>		
<u>Richard Linsenmann, Valparaiso, IN</u>		
<u>Karen K. Mattor, Merrimack, NH</u>		

<u>C.H. Miller, Des Moines, IA</u>		
<u>Jerry Nolan, Grand Junction, CO</u>		
<u>Aida Parkinson, McKinleyville, CA</u>		
<u>Willard Phillips, Palisade, CO</u>		
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<u>Steve Smith, Grand Junction, CO</u>		
<u>Steve Stemmer, Westminster, CO</u>		
<u>William Stoddard, Mesa, CO</u>		
<u>Dave Trappett, Grand Junction, CO</u>		
<u>John Weisheit, Moab, UT</u>		
<u>WATER DISTRICTS</u>		
<u>Dale Tooker</u>	<u>Clifton Water District</u>	<u>Clifton, CO</u>
<u>Eric Kuhn</u>	<u>Colorado River Water Conservation District</u>	<u>Glenwood Springs, CO</u>
<u>Phil Bertrand</u>	<u>Grand Valley Irrigation Company</u>	<u>Grand Junction, CO</u>
<u>Dick Proctor</u>	<u>Grand Valley Water Users Association</u>	<u>Grand Junction, CO</u>
<u>Wendell Johnson</u>	<u>Hartland Irrigation District</u>	<u>Delta, CO</u>
<u>Sean Norris</u>	<u>Mesa County Irrigation District</u>	<u>Palisade, CO</u>
<u>Larry Clever</u>	<u>Ute Water Conservancy District</u>	<u>Grand Junction, CO</u>
<u>Rita Crumpton</u>	<u>Orchard Mesa Irrigation District</u>	<u>Palisade, CO</u>
<u>John Krizman</u>	<u>Palisade Irrigation District</u>	<u>Clifton, CO</u>
<u>CITY AND COUNTY GOVERNMENT</u>		
<u>Jim Adams</u>	<u>City of Fruita</u>	<u>Fruita, CO</u>
<u>Greg Trainor</u>	<u>City of Grand Junction, Public Works Dept.</u>	<u>Grand Junction, CO</u>
<u>Keith Lambert</u>	<u>City of Rifle</u>	<u>Rifle, CO</u>
--	<u>Garfield County Commissioners</u>	<u>Glenwood Springs, CO</u>
--	<u>Mesa County Commissioners</u>	<u>Grand Junction, CO</u>
<u>Kurt Larsen</u>	<u>Mesa County Planning Director</u>	<u>Grand Junction, CO</u>
<u>Debbie Weaver</u>	<u>Town of DeBeque</u>	<u>DeBeque, CO</u>
<u>Douglas Edwards</u>	<u>Town of Palisade</u>	<u>Palisade, CO</u>
<u>Juanita Satterfield</u>	<u>Town of Parachute</u>	<u>Parachute, CO</u>
<u>RECOVERY PROGRAM</u>		
<u>Reed Kelley</u>		<u>Meeker, CO</u>
<u>Tom Blickensderfer</u>	<u>Colorado Department of Natural Resources</u>	<u>Denver, CO</u>
<u>Bruce McCloskey</u>	<u>Colorado Division of Wildlife</u>	<u>Denver, CO</u>
<u>Tom Nesler</u>	<u>Colorado Division of Wildlife</u>	<u>Fort Collins, CO</u>

<u>Chris Treese</u>	<u>Colorado River Water Conservation District</u>	<u>Glenwood Springs, CO</u>
<u>John Hawkins</u>	<u>Colorado State University</u>	<u>Fort Collins, CO</u>
<u>Tom Pitts</u>	<u>Water Consult</u>	<u>Loveland, CO</u>
<u>John Reber</u>	<u>National Park Service</u>	<u>Denver, CO</u>
<u>Robert Wigington</u>	<u>The Nature Conservancy</u>	<u>Boulder, CO</u>
<u>Dave Mazour</u>	<u>Tri-State Generation and Transmission, Inc.</u>	<u>Denver, CO</u>
<u>Tom Chart</u>	<u>U.S. Fish and Wildlife Service</u>	<u>Salt Lake City, UT</u>
<u>Nancy Coulam</u>	<u>U.S. Bureau of Reclamation</u>	<u>Salt Lake City, UT</u>
<u>Susan Baker</u>	<u>U.S. Fish & Wildlife Service</u>	<u>Denver, CO</u>
<u>Bob Muth</u>	<u>U.S. Fish & Wildlife Service</u>	<u>Denver, CO</u>
<u>Chuck McAda</u>	<u>U.S. Fish & Wildlife Service</u>	<u>Grand Junction, CO</u>
<u>Terry Sexson</u>	<u>U.S. Fish & Wildlife Service</u>	<u>Denver, CO</u>
<u>George Smith</u>	<u>U.S. Fish & Wildlife Service</u>	<u>Denver, CO</u>
<u>Clayton Palmer</u>	<u>U.S. Western Area Power Administration</u>	<u>Salt Lake City, UT</u>
<u>Art Roybal</u>	<u>U.S. Western Area Power Administration</u>	<u>Golden, CO</u>
<u>Kevin Christopherson</u>	<u>Utah Department of Natural Resources</u>	<u>Vernal, UT</u>
<u>Marty Ott</u>	<u>Utah Department of Natural Resources</u>	<u>Salt Lake City, UT</u>
<u>Barry Saunders</u>	<u>Utah Department of Natural Resources</u>	<u>Salt Lake City, UT</u>
<u>Mark Hadley</u>	<u>Utah Division of Wildlife Resources</u>	<u>Salt Lake City, UT</u>
<u>Randy Radant</u>	<u>Utah Division of Wildlife Resources</u>	<u>Salt Lake City, UT</u>
<u>Paul Dey</u>	<u>Wyoming Game & Fish Department</u>	<u>Cheyenne, WY</u>
<u>John Shields</u>	<u>Wyoming State Engineer's Office</u>	<u>Cheyenne, WY</u>
<u>STATE GOVERNMENT</u>		
<u>Jane Norton</u>	<u>Colorado Department of Health</u>	<u>Denver, CO</u>
<u>Sally Schuff</u>	<u>Colorado Department of Agriculture</u>	<u>Denver, CO</u>
<u>Russell George</u>	<u>Colorado Dept. of Natural Resources</u>	<u>Denver, CO</u>
<u>Larry Abbott</u>	<u>Colorado Dept. of Transportation</u>	<u>Grand Junction, CO</u>
<u>Richard Perski</u>	<u>Colorado Dept. of Transportation</u>	<u>Grand Junction, CO</u>
<u>Edward Fink</u>	<u>Colorado Dept. of Transportation</u>	<u>Grand Junction, CO</u>
<u>Allen Matellero</u>	<u>Colorado Division of Water Resources, Div 5</u>	<u>Glenwood Springs, CO</u>
<u>Hal Simpson</u>	<u>Colorado Division of Water Resources</u>	<u>Denver, CO</u>
<u>John Toolen</u>	<u>Colorado Division of Wildlife</u>	<u>Grand Junction, CO</u>
<u>Georgianna Contiguglia</u>	<u>Colorado State Historic Preservation Officer</u>	<u>Denver, CO</u>
<u>Kurt Mill</u>	<u>Colorado State Parks, West Region</u>	<u>Clifton, CO</u>
<u>Rod Kuharich</u>	<u>Colorado Water Conservation Board</u>	<u>Denver, CO</u>
<u>Randy Seaholm</u>	<u>Colorado Water Conservation Board</u>	<u>Denver, CO</u>

<u>STATE LEGISLATORS</u>		
<u>Gayle Berry</u>	<u>Colorado State Representative</u>	<u>Grand Junction, CO</u>
<u>Greg Rippy</u>	<u>Colorado State Representative</u>	<u>Rifle, CO</u>
<u>Matt Smith</u>	<u>Colorado State Representative</u>	<u>Grand Junction, CO</u>
<u>Ron Teck</u>	<u>Colorado State Senator</u>	<u>Grand Junction, CO</u>
<u>FEDERAL GOVERNMENT</u>		
<u>Robert Steward</u>	<u>Department of the Interior</u>	<u>Denver, CO</u>
<u>Ken Jacobson</u>	<u>U.S. Army Corps of Engineers</u>	<u>Grand Junction, CO</u>
<u>Carlos Sauvage</u>	<u>U.S. Bureau of Land Management</u>	<u>Grand Junction, CO</u>
<u>Bob Fletcher</u>	<u>U.S. Federal Energy Regulatory Commission</u>	<u>Washington, D.C.</u>
<u>Regina Saizan</u>	<u>U.S. Federal Energy Regulatory Commission</u>	<u>Washington, D.C.</u>
<u>The Secretary</u>	<u>U.S. Federal Energy Regulatory Commission</u>	<u>Washington, D.C.</u>
<u>Al Pfister</u>	<u>U.S. Fish and Wildlife Service</u>	<u>Grand Junction, CO</u>
<u>George Smith</u>	<u>U.S. Fish & Wildlife Service</u>	<u>Denver, CO</u>
<u>Newell Hoskins</u>	<u>U.S. Coast Guard Auxiliary</u>	<u>Grand Junction, CO</u>
<u>Paul von Guerard</u>	<u>U.S. Geological Survey, Water Resources Div.</u>	<u>Grand Junction, CO</u>
<u>Jeff Burwell</u>	<u>U.S. Natural Resource Conservation Service</u>	<u>Grand Junction, CO</u>
<u>Gary Burton</u>	<u>U.S. Western Area Power Administration</u>	<u>Lakewood, CO</u>
<u>CONGRESSIONAL DELEGATION</u>		
<u>George Rossman</u>	<u>Senator Ben Nighthorse Campbell</u>	<u>Grand Junction, CO</u>
<u>Bill Andries</u>	<u>Congressman Scott McInnis</u>	<u>Grand Junction, CO</u>
<u>Beth Washburn</u>	<u>Senator Wayne Allard</u>	<u>Grand Junction, CO</u>

PRESS

Dave Buchanan	Grand Junction Daily Sentinel	Grand Junction, CO
Nancy Lofhola	Denver Post	Grand Junction, CO
--	Palisade Tribune	Palisade, CO
--	Fruita Times	Fruita, CO
--	Glenwood Post Independent	Glenwood, CO
--	Citizens Telegram	Rifle, CO
--	Delta County Independent	Delta, CO
--	Gunnison Country Times	Gunnison, CO
--	High Country News	Paonia, CO
--	KREX TV Station	Grand Junction, CO
--	KJCT TV Station	Grand Junction, CO
--	KKCO TV Station	Grand Junction, CO
--	KCIC FM Radio	Grand Junction, CO
--	KEKB Radio	Grand Junction, CO
--	KEXO/KKNN/KQIL/KQIX Radio	Grand Junction, CO
--	KGLN Radio	Glenwood Springs, CO
--	KJYE/KNZZ Radio	Grand Junction, CO
--	KMTS Radio	Glenwood Springs, CO
--	KPRN Public Radio	Grand Junction, CO
--	KQIX Radio	Glenwood Springs, CO
--	KSTR Radio	Grand Junction, CO
--	KVNF Radio	Paonia, CO

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Appendix B-Comment Letters

From: <PSWINN@aol.com>
To: <tstroh@uc.usbr.gov>
Date: 9/6/02 11:12AM
Subject: Comments on Price-Stubb Fish Passage SDEA (July 26, 2002)

Subj: Price-Stubb draft comments
Date: 09/05/2002 1:08:49 PM Mountain Daylight Time
From: PSWINN
To: h20west@acsol.net
CC: kayakbum@hotmail.com, PSWINN

Sept 3, 2002

Terence Stroh
US Bureau of Reclamation

Re: Comments on Price-Stubb Fish Passage dated July 26, 2002

As one of the primary river recreation organizations in the Grand Valley area, the Western Association to Enjoy Rivers (WATER) agrees with the preferred alternative for allowing endangered fish proposed in this supplemental draft environmental assessment (SDEA). The Downstream Rock Fish Passage best addresses the concerns of all parties involved.

This alternative also allows for safe potential recreation boat passage. However, the Bureau comments in the SDEA that the fish channel on river left is not intended for safe boat passage. The dam is 300 ft across and the fish ladder channel is 50 ft across, leaving 250 feet of crest with the same elevation. Except at flows that are significantly higher than the 650 cfs taken by the fish ladder cut, the water passing over the 250 ft of level crest will be too shallow for boats, causing boaters to use the fish ladder because there is no other choice. Unfortunately, these low flows often occur during the latter half of the boating season. By not including an alternative to the fish ladder, the Bureau is inadvertently encouraging boaters to use it at low flows.

WATER believes that another, smaller cut should be made in the crest of the dam that concentrates flows above 650 cfs and below 975 cfs (a typical minimum annual low flow). This will provide recreational boaters with an alternative to floating the fish channel and can be done at either no additional cost or a small additional cost. There are precedents for the Bureau to provide safe access, such as sites on a canal in the Denver area and on a diversion dam on the Animas that were built because of deaths associated with original Bureau structures.

According to USGS flow data for Cameo, there were 180 days of flows less than 975 cfs during the past 68 years - less than 1% of the days, and most of these occurred in the winter months when endangered fish do not migrate. Consequently, a second cut which carries 325 cfs (half of the volume of the fish ladder cut) will cause the flow in the fish ladder cut to drop below 650 cfs on average about 2 days per year, certainly not a significant concern, especially since one of these days typically occurs in the winter when fish do not migrate. Using assumptions similar to those in the report

summarizing results of the 1:20 scale physical model study (Price-Stubb Diversion Dam Fish Passage Structure, Colorado River, R-01-01, April 2001), a cut that is 2 feet deep over a width of 5 feet, tapering 20 feet in each direction to the dam crest (overall width 45 ft, max depth 2 ft) would have half the cross sectional area of the fish ladder cut (50 sq ft versus 100 sq ft) and thus take half of the flow (325 cfs vs 650 cfs).

In the event that Colorado State Parks or another government entity such as Mesa County or the City of Palisade were to purchase the land on river right adjacent to and downstream from the dam, placement of this cut on river right would allow land access to this channel. Placement of larger rocks within this boating channel would cause river features such as waves and holes which could be utilized for whitewater races and rodeo events. Because the Colorado River has flows year round, these events could be scheduled for periods of time when other whitewater events in Colorado were not possible due to low flows, drawing visitors to the area which do not currently come here. Other cities which host these events have seen significant economic benefits.

We estimate the Bureau would need to emplace about 7,000 cubic yards less rock than they would if this channel were not installed, assuming the cross sectional area of rock that the Bureau would not need to emplace is the same as the cross sectional area of the cut in the dam over the 400 ft. length of the rock wedge below the dam. Not having to purchase, haul and emplace this volume of would significantly offset the cost of making the cut in the dam.

We urge the Bureau to consider this modification to the preferred alternative.

Pete Winn, Water Park Committee
Western Assocation To Enjoy Rivers (WATER)
Grand Junction CO

CC: <PSWINN@aol.com>, <kayakbum@hotmail.com>, <h2owest@acsol.net>



MESA COUNTY DEPARTMENT OF PLANNING AND DEVELOPMENT

Land Use and Development ♦ Long Range Planning ♦ Code Enforcement

750 MAIN STREET P. O. BOX 20000 GRAND JUNCTION, COLORADO 81502-5022

5 September, 2002

U.S. Department of the Interior, Bureau of Reclamation
Attn: Carol DeAngelis
2764 Compass Dr., Suite 106
Grand Junction, CO 81506-8785

Re: Supplemental Draft EA – Fish Passage – Price-Stubb Diversion Dam

Dear Ms. DeAngelis:

Thank you for the opportunity to comment on the draft EA for a fish passage at the Price-Stubb Diversion Dam and fish screen in the Government Highline Canal. Mesa County is committed to conservation of natural resources and is supportive of this project. While supportive of the project, the County offers the following:

Mesa County requires a floodplain permit for any construction activity that takes place in the Colorado River floodplain. The Mesa County Land Development Code 2000, section 7.13 through 7.13.11 contains specific criteria necessary to obtain this permit. For more specific information please contact Mesa County Floodplain Administrator, Kent Wagoner at 970-255-7190.

The County may require an administrative site plan review for temporary use activities in the construction staging area. Sections 3.5 and 3.5.11 of the Mesa County Land Development Code 2000 provide the information necessary to obtain this clearance. For further information or specific questions please contact Christie Barton, Planner 1, at 970-244-1744.

Construction of a hydroelectric power generation project may require a Conditional Use Permit from Mesa County. Such facilities are included in the definition of Industrial use Categories under manufacturing and Production (Sections 5.1 and 12.6 of the Mesa County Land Development Code 2000). Please call 970-244-1636 for more information.

We request a weed management plan (including follow-up control measures) be included as an element of the reclamation and revegetation plan for the staging area and any wetlands mitigation area. Please contact the Mesa County Horticulture, Weed, and Pest Inspector, Judith Sirota at 970-255-0795 for a list of designated noxious weeds in Mesa County, review of your weed management plan, or any questions you may have.

Mesa County requires an access permit for any access to and from county roads. Additional county permits that may be required include: grading, building, surface disturbance permits for work within County rights-of-way. Please contact Mesa County Public Works Department at 970-244-1765.

OFFICIAL FILE COPY RECEIVED BOR W.C.A.O. NORTHERN DIVISION
SEP - 9 2002
CLASS PRJ. CNTR. FLDR. CLASS INITIA NAME

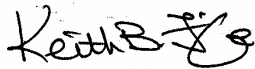
Continued on back of page

Comments - Supplemental Draft EA – Fish Passage – Price-Stubb Diversion Dam
5 September, 2002

As a partner in the Mesa County Greenway project we support the protection and conservation of the Colorado River riparian area for a variety of purposes including critical wildlife habitat, irrigation diversions, and recreational uses. We understand the preferred alternative may provide the opportunity for a trail corridor adjacent to Interstate 70 and would provide limited recreational boating opportunities.

If I can be of assistance to you please contact me at 970-244-1650.

Sincerely,



Keith B. Fife, AICP

Long Range Planning Division Director

- c. Kurt Larsen, Director, Department of Planning and Development
- Linda Dannenberger, Land use and Planning Division Director
- Kent Wagoner, Floodplain Administrator
- Judith Sirota, Horticultural, Weed and Pest Inspector
- Christie Barton, Planner 1
- file

Mr. Terence Stroh
Bureau of Reclamation
Western Colorado Area Office
2764 Compass Drive
Grand Junction, CO 81506

		PL 107

September 17, 2002

Dear Mr. Stroh:

This responds to the Price-Stubb Fish Passage Supplemental Draft Environmental Assessment.

I support your preferred alternative, which is a Downstream Rock Fish Passage. I believe this alternative best meets the concerns of the various interested entities. This alternative will provide a reasonably safe boat passage, which is the chief concern of those involved with the Colorado River Greenway.

I would like you to know that the Riverfront Commission is looking at a greenway trail on river left at this location. Therefore, anything you can do to make the riprap fill against Highway 70 compatible with a trail would be appreciated.

Sincerely,



ROBERT M. CRON
Legacy Coordinator
Colorado River Greenway

From: "Gary Lacy" <Gary.Lacy@worldnet.att.net>
To: "Terence Stroh" <tstroh@uc.usbr.gov>
Date: 8/23/02 12:24PM
Subject: Price-Stubbs

I have reviewed your Draft Supplemental EA for the above project and concur with the preferred alternative as long as appropriate, navigable, in-stream whitewater structures are included on the downstream face of the dam. These structures need to be spaced considerably apart and designed to function safely for a wide range of paddlers at a wide range of flows. This can be done economically and will be a benefit to the fish and the habitat/recreational value of the area. Please review my drawings commissioned by the Colorado Riverfront commission.

Thankyou, Gary Lacy PE



CREDA
Colorado River Energy Distributors Association

ARIZONA

Arizona Municipal Power Users Association

Arizona Power Authority

Arizona Power Pooling Association

Irrigation and Electrical Districts Association

Navajo Tribal Utility Authority
 (also New Mexico, Utah)

Salt River Project

COLORADO

Colorado Springs Utilities

Intermountain Rural Electric Association

Platte River Power Authority

Tri-State Generation & Transmission Association, Inc.
 (also Nebraska, Wyoming, New Mexico)

Yampa Valley Electric Association, Inc.

NEVADA
 Colorado River Commission of Nevada

Silver State Power Association

NEW MEXICO

Farmington Electric Utility System

Los Alamos County

Tri-State Generation & Transmission Cooperative

City of Truth or Consequences

UTAH

City of Provo

Strawberry Electric Service District

Utah Associated Municipal Power Systems

Utah Municipal Power Agency

WYOMING

Wyoming Municipal Power Agency

Leslie James
 Executive Director
 CREDA
 4625 S. Wendler Drive, Suite 111
 Tempe, Arizona 85282

Phone: 602-748-1344
 Fax: 602-748-1345
 Cellular: 602-469-4046
 Email: creda@qwest.net

September 23, 2002

Mr. Terence Stroh
 Bureau of Reclamation
 Western Colorado Office
 2764 Compass Drive, Suite 106
 Grand Junction, CO 81506

Via email: tstroh@uc.usbr.gov

RE: Supplemental Draft Environmental Assessment for Endangered Fish Passage at the Price-Stubbs Diversion Dam

Dear Mr. Stroh:

The Colorado River Energy Distributors Association (CREDA) is a non-profit association comprised of power customers of the Colorado River Storage Project (CRSP). CREDA members serve nearly three million consumers in six states; CREDA is a participant in the Upper Basin Endangered Fish Recovery Program.

CREDA offers the following comments on the Draft EA:

1) Throughout the document there is reference made to costs of the various alternatives and comment that certain costs will be funded by the Recovery Program. As CRSP power customers fund a significant portion of the Recovery Program costs, we believe it appropriate to include "CRSP power customers" in the listing of entities identified as participating in the Recovery Program (page 2, first full paragraph). Likewise, in responding to the "Issue: Some people question using taxpayers' money to provide passage for endangered fish" on page 44, CREDA suggests including specifics as to how the Recovery Program is funded (i.e., capital funding by States and CRSP power customers; ongoing base funding by CRSP power customers).

2) Clearly, an objective of the Recovery Program is to control nonnative fish species (EA page 3), as "predation by and competition with nonnative fishes are believed to be significant factors in the decline of the Colorado River fishes" (EA page 36). The EA describes the 5.3-mile area between Price-Stubbs Diversion Dam and the Grand Valley Diversion Dam as relatively devoid of nonnative fish. The Preferred Alternative would open up this area to both native and nonnative fish, and as has been seen in the Grand Valley, nonnative fish constitute the vast (over 90%) majority within the fish community. Keeping nonnative fish out of this reach is desirable; a conventional fish ladder with a trap to selectively pass only native fish is not only less costly than the Preferred Alternative (\$2.5 million vs. \$3.1 million), but it would provide an additional 5.3 miles of river plus a tributary relatively free of nonnative fish. Passage without selective passage (a trap) reduces the value of the 5.3 miles to recovery of endangered fish, except as a migration corridor. It also negatively affects the area as potential habitat for downstream migrating larval fish due to the potential for predation. The Draft EA discusses the benefits of "more natural" passage but does not appear to address this concern and goal. We believe there is an opportunity for the Recovery Program to limit contact between endangered and nonnative fish by allowing selective passage at Price-Stubbs. It is not clear from the technical discussion that the Preferred Alternative justifies the added cost. Since the Recovery Program will be funding the project, we suggest the technical merits and costs of the alternatives should be discussed within the appropriate committees of the Recovery Program prior to a final decision being made.

Thank you for the opportunity to provide comments on the Draft EA.

Sincerely,
 Leslie James
 Executive Director

Cc: CREDA Board

From: <carlos_sauvage@co.blm.gov>
To: <tstroh@uc.usbr.gov>
Date: 8/27/02 4:13PM
Subject: Price-Stubb Passage comment

As a personal comment, I support the proposed alternative (Downstream Rock Fish Passage) as the most practical. I would prefer total dam removal if not for the probable future likelihood and cost of nuisance liability issues.

Carlos Sauvage, Box 55,
Palisade, Co. 81526

STATE OF COLORADO

DEPARTMENT OF TRANSPORTATION
Region 3

222 South Sixth Street, Room 317
Grand Junction, Colorado 81501-2769
(970) 248-7225 FAX# (970) 248-7254



January 28, 2004

Ms. Carol DeAngelis
Western Colorado Area Manager
Bureau of Reclamation
2764 Compass Drive, Suite 106
Grand Junction, CO 81506-8785

Dear Ms. DeAngelis:

The Colorado Department of Transportation (CDOT) is requesting that the U.S. Bureau of Reclamation (BOR) clarify the potential inclusion of a Whitewater Park recreational feature as part of the BOR project to construct a fish passage at the Price-Stubb dam. CDOT is concerned that the BOR Draft Environmental Assessment (EA) has not addressed the issues and impacts of any proposed recreational feature. If the Whitewater Park is being considered for inclusion in the BOR project, its impacts must be evaluated and included in an EA. CDOT believes that a Whitewater Park would significantly impact the operation and safety of I-70 and other adjacent properties and interests. Potential Whitewater Park EA scoping issues would include public access, safety, ownership, liability, management responsibility, parking, sanitation, impacts to riparian areas, I-70, railroad property and facilities, and the Ute Water pump station.

In 1960 CDOT purchased the Right of Way (ROW) for construction of I-70 from the Grand Valley Water Users Association and the Palisade Irrigation Company immediately downstream of the Price Stubb dam and encompassing the full width of the Colorado River. CDOT then constructed a Colorado River channel change to allow for I-70 river encroachments and the construction of a 1200 ft. long bridge. Since the construction of I-70, the ROW has been administered with full access control and CDOT and the UP Railroad have not allowed public access to this portion of the Colorado River. In the early 1980's CDOT and the Railroad improved the gate and guardrail to prevent river access and unauthorized camping within the ROW from the old Highway 6 bridge. CDOT controls public access and manages this area to preserve and protect the riverside riparian habitat.

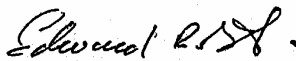
CDOT and FHWA support the establishment of a fish passage and a uniform gradient fill to eliminate the Price-Stubb Dam obstructions. The proposed whitewater park lies within the Interstate 70 controlled access ROW. Any activities within this controlled access ROW are severely restricted. CDOT and Federal Highway Administration (FHWA) approvals are required for any BOR activities or actions within the Interstate Highway ROW, which will be

Ms. Carol DeAngelis
Bureau of Reclamation
January 28, 2004
Page 2

documented in an IGA after completion of an EA. We are also concerned that private fund raising for final design of a Whitewater Park is apparently proceeding prior to any environmental analysis and without landowner approvals in order to meet the BOR project schedule.

We are requesting that you clarify the BOR project scope and schedules for the Price- Stubb Fish Passage. If a Whitewater Park recreation feature is being considered as part of the BOR project, we are requesting that you re-draft the EA and initiate formal scoping contacts with directly affected individuals, landowners and entities including the FHWA, CDOT, UPRR, Ute Water, and the Town of Palisade so that these issues can be adequately addressed and resolved.

Sincerely,



Ed Fink, Director
Transportation Region 3

c: FHWA
UPRR
Town of Palisade
Ute Water
File

From: "Leslie James - CREDA" <creda@qwest.net>
To: "Terry Stroh" <TSTROH.4GJPO@uc.usbr.gov>
Date: Wed, May 19, 2004 9:48 AM
Subject: Price Stubb EA

Terry - I'm not going to send in further comments on the EA, but just wanted to point out "State" should be "States" on your cover page.
Leslie James

From: <h2owest@acsol.net>
To: <tstroh@uc.usbr.gov>
Date: 5/25/2004 11:46:23 AM
Subject: Fwd: River park support

----- Message Forwarded on 05/25/04 -----

From: "Morgan, Rick" <Rick.Morgan@med.va.gov>
To: "'info@grandvalleyriverpark.org'"
<info@grandvalleyriverpark.org>
Subject: River park support
Date: Mon, 24 May 2004 10:08:46 -0700

Hello, I am a Family and E/D , Physician considering moving to Grand Junction. My decision to move to GJ would greatly be enhanced if you build a kayak whitewater play park there. I currently live in Farmington NM. which has a small two drop river park. This has been a great asset to this town, with many boaters traveling in to use it when the water is low elsewhere. These boaters buy food, stay in the hotels etc as they visit. It is an easily maintained park as boaters do not carry coolers of beer or leave trash . Just look at Santa Rita play park in Durango also. This certainly enhances a town to have this type of facility available. As a community minded physician, I would certainly support this park with my taxes, with donations of time and money to keep it safe and beautiful. Please approve the public access, play park option as the best option for community enhancement and future growth. If you want to contact me please do so through DRJRMorgan@yahoo.com or (505) 360-8463. Please feel free to share this with the public meeting as I will not be able to attend. J Rick Morgan DO

From: "Karen Hensley" <kfhoz@hotmail.com>
To: <tstroh@uc.usbr.gov>
Date: 5/26/2004 3:41:03 PM
Subject: Support for Whitewater park ON THE COLORADO RIVER NEAR PALISADE

Dear Sir or Madam,

My vacations each year are taken to states that have white water to run. I support having a fish ladder with whitewater recreation features, and a park on the Colorado River near Palisade.

Although I am not local, I expect to visit Colorado and other states to paddle.

Sincerely,
Karen F. Hensley
7934 - 170 Place NE
Redmond, WA 98052

May 28, 2004

Mr. Terence Stroh
Bureau of Reclamation
Western Colorado Area Office
2764 Compass Drive
Grand Junction, Colorado 81506

Dear Mr. Stroh:

I have reviewed the revised Draft Supplemental Environmental Assessment for Providing Passage at the Price-Stubb Diversion Dam on the Colorado River near Palisade, Colorado

I am a whitewater kayaker, a former resident of Utah and Colorado, with a background in wildlife biology and natural resource management, and have been a land use and resource planner and environmental compliance specialist for a federal land management agency for nineteen years. I have kayaked extensively on various reaches of the Colorado River from Glenwood Springs to the Grand Canyon since 1987, and I continue to travel to Colorado to take advantage of the whitewater opportunities. I have been a member of American Whitewater since 1996. The agency for which I work is currently engaged in trying to protect and restore wild anadromous salmonid stocks listed as threatened.

I have no substantive comments as defined by NEPA on the proposed action. The EA is well-written, well organized and complete, and could be used as a model of a concise analytical NEPA document.

I am pleased that the Bureau has considered whitewater recreation to be an important use of the project area, and has accounted for boater safety and recreational opportunities as well as endangered fishes.

However, if I had to choose between whitewater recreation and protection of endangered fishes, the fish are more important to me. Had fish and other aquatic resources been given equal consideration with water supply, power generation, and large storage reservoirs over the past 100 years, the fish would not be endangered and there would be less demand to create artificial whitewater recreation facilities such as whitewater parks.

Increasing human populations and competing demands for water, particularly from the Colorado River, will make protection of native fish increasingly difficult. The whitewater community is one of the strongest advocates for river conservation in the United States. Desirable whitewater conditions are almost always compatible with protection and restoration of endangered fish populations in western rivers.

I encourage the Bureau to support the whitewater community in its pursuit of appropriate whitewater opportunities and facilities, and to work with CDOT to provide safe and legal access to Colorado River.

Thank you for the opportunity to review and comment on the project.

Sincerely,

Aida Parkinson
1515 Airport Road
McKinleyville CA 95519

cc: (via electronic mail; no hardcopy)

Acting Executive Director, American Whitewater, Silver Springs, MD < Jason@amwhitewater.org >

Pete Winn, WATER, Grand Junction, CO <PSWINN@aol.com>

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RECEIVED BOR W.C.A.O.
NORTHERN DIVISION

JUN 4 2004

CLASS *ENV 100*
PRJ. *27*
CNTR. *450305*
FLDR. *450305*

CLASS	INITIALS	SURNAME
<i>6/7</i>	<i>VB</i>	<i>T. SHOK</i>
<i>6/14</i>	<i>BPJ</i>	<i>WILL</i>
<i>6/15</i>	<i>KBO</i>	<i>DRAG</i>
		<i>STAN</i>
		<i>SILVER</i>
		<i>SILVER</i>
		<i>CD-Arg</i>

From: "Rita C" <ritac@ahinet.com>
To: <tstroh@uc.usbr.gov>
Date: 5/31/2004 10:22:28 AM
Subject: Revised Supplemental DRAFT EA

May 31, 2004

Terence Stroh
U.S. Bureau of Reclamation

Mr. Stroh:

Thank you for the opportunity to comment on the Revised Supplemental DRAFT Environmental Assessment (EA) for providing endangered fish passage at the Price-Stubb Diversion Dam on the Colorado River.

The Orchard Mesa Irrigation District provides irrigation water to nearly 10,000 acres of land located on East Orchard Mesa and Orchard Mesa in the Grand Valley. Our point of diversion from the Colorado River is at the Grand Valley Project Diversion Dam in Debeque Canyon, operated by the Grand Valley Water User's Association, and our local point of diversion is at the Colorado River Siphon located 3,600 feet upstream of the Price-Stubb Diversion Dam.

Our comments are as follows:

1. We note in the DRAFT EA the discussion relative to scour and velocities in the river and the possible changes that may occur in four of the five alternatives. Although the Bureau of Reclamation is convinced that no scour or velocity changes will affect the siphon, we feel it necessary to be on record as concerned that the four-foot cover over the siphon may be affected, to our detriment. If that cover is lessened, the siphon will float, causing untold problems and damages to our landowners/irrigators. We would ask for assurance that, were that to occur, the Recovery Program and/or the Bureau of Reclamation would assume responsibility for repairs and costs associated with those repairs, as well as damages to our landowners and their lands and/or crops.

2. Although we do not have a point of diversion below the Price-Stubb Diversion Dam, we do have a "check back channel" located downstream from the Price-Stubb and across the river (river left) from the Grand Valley Irrigation Company's diversion. We have some safety concerns if Alternative 4 is selected, relative to whitewater rafters coming into the check channel and being injured by being thrown up against our check gates. We understand that the rafters should be exiting the river before they reach our location, however, we also know that that may not always occur. Our safety concerns should be noted if that is the alternative selected.

Thank you for the opportunity to provide comments on the DRAFT EA.

Sincerely,

Rita Crumpton, Manager
Orchard Mesa Irrigation District

CC: "Dick Proctor" <Gvwua1147@aol.com>, "Phil Bertand" <gvic@sprynet.com>, "Mark Hermundstad" <mherm@wth-law.com>

Frank Bering

284 W. Morrison Court
Grand Junction, CO, 81503

Home Phone: 970-242-7519

Fax: 970-242-6654

email: frankbering@bresnan.net

June 1, 2004

Mr. Brett Uilenberg
U.S. Bureau of Reclamation
2764 Compass Drive
Grand Junction, CO 81506

Dear Mr. Uilenberg

OFFICIAL FILE COPY
RECEIVED BOR W.C.A.O.
NORTHERN DIVISION

JUN 2 2004

CLASS JUN 700
PRJ
CNTR 2000 733
FLDR 7101

CLASS	INITIALS	SURNAME
8/3	SC	STUBBS
		OSPEL

OFIK International (Old Farts in Kayaks) heartily supports The Price Stubbs Water Park. Kayaking is a wonderful sport for Geezers. Worn out knees and hips don't matter. In a kayak we too can become Otters. I started on my 60th birthday eight years ago. A Whitewater Park makes it easy for us, and everyone else, to practice and enjoy playing in the river.

The Price Stubbs site offers water flows adequate to host national competitions, international events, and recreation for Colorado boaters year around. It can become one of the premier facilities in the US.

Thank you and the Bureau of Reclamation for your support.

Sincerely,

Frank Bering

McLaughlin Water Engineers
an **ASCG** Company
ENGINEERS • ARCHITECTS • SURVEYORS • PLANNERS

June 2, 2004

Mr. Terence Stroh
General Biologist
U.S. Department of the Interior
Bureau of Reclamation
Western Colorado Area Office
Grand Junction, Colorado

RE: Comments on the
Price-Stubb Fish Passage
Revised Supplemental Draft Environmental Assessment

Dear Mr. Stroh:

McLaughlin Water Engineers/ASCG is providing this letter in response to your request for comments issued in the News Release of May 14, 2004. We believe that the alternative "Downstream Rock Fish Passage with Whitewater Recreation Features" is the best alternative of those presented. It will benefit the environment, the fishery, the condition of the dam, enhance safety, provide for boating recreation, and by far is of the highest socio-economic benefit.

We have been employed by the WATER group to explore initial concepts for a whitewater facility. Basically, a whitewater bypass stream is feasible, within the slope specified and the length allowed. We make this statement based on our experience with similar facilities and review of the site conditions. Key details, coordination with your proposal, boating flow range, and other important facilities and provisions need to be explored further, which may be undertaken in subsequent efforts. Because of the vertical drop through the reach and length of potential whitewater downstream to the I-70 bridges, this site has extraordinary potential for whitewater boating on a regional and national basis. The Colorado River has flow that would make boating possible when most other rivers have dried up. The site offers near year round whitewater, and a socio-economic opportunity for the Grand Valley.

We offer the following in a positive sense, to improve the design concepts, facilities, and chances of implementing a whitewater passage:

12596 WEST BAYAUD AVE. # 200
303.458.5550



LAKEWOOD, COLORADO 80228
Fax 303.480.9766

1. River dam remodeling and river restoration projects routinely provide for boating and river recreation. A "cost of doing business" for this fishery project should be to implement features for safe boating and river recreation.
2. The dam as it exists, and with any alternatives that have a steep sloping face and/or conventional "hydraulic jumps," or "keepers" in boater vernacular, have extreme safety problems. We don't believe the existing dam is likely to remain stable, given the scour hole that has developed and the degrading streambed below.
3. The fish passage as devised is a singular purpose component, which as indicated in the EA could be hazardous to boating. We have included joint fish and boating passage capability into most of our facilities with success. A combined facility would provide for lower fish passage velocities and increase habitat. This performance can readily demonstrated by existing facilities, hydraulic physical models and numerical 3-d modeling. As presently devised the whitewater and fish passage components compete for water, have conflicts which can be avoided or further minimized, and don't achieve the best economics and benefits, in our opinion.
4. Since no detailed analytical and design work for the whitewater passage has been conducted, the plan of action should allow reasonable time and funding to pursue a better coordinated project. This statement should not be construed to imply that the project with whitewater is not feasible, but that there are important issues, including developing a better opinion of the project costs with whitewater facilities. Additional time would allow for funding efforts.
5. Somewhat like CDOT, we have concerns about site access and safety.
6. However we don't think this concern should be used as to eliminate boating. Boating is popular and active along most of our highways and can be reasonably managed. We believe safe access directly to the west (right) bank, portage, and emergency provisions must be included. Highway safety and provision for future transportation needs should be included, which we believe has been incorporated. The best action regarding right of way would be for the river and west bank to be owned by the local government sponsor.
7. The Hydro Power key details should be explored, such that the fishery and people are provided for. The concept of using old head gates and intakes hazardous to fish or boaters, is not valid in our view.

Again, we support the Alternative, "Downstream Rock Fish Passage with Whitewater Recreation Features" of the alternatives discussed.

Sincerely,

McLaughlin Water Engineers, Ltd.
An ASCO Company



William C. Taggart, P.E.
Senior Engineer



12596 WEST BAYAUD AVE. #200 • LAKEWOOD, COLORADO 80228
303.458.5550 • Fax 303.480.9766

UNION PACIFIC RAILROAD COMPANY



Susan K. Grabler
Manager Industry & Public Projects

1400 W. 52nd Avenue
Denver, CO 80221

June 3, 2004

Ms. Sue Moyer
Deputy Area Manager
Bureau of Reclamation
2764 Compass Drive, Ste. 106
Grand Jct., CO 81506-8785

SUBJECT: Draft Environmental Assessment (DEA) for the Price-Stubb Diversion Dam

Dear Ms. Moyer:

Union Pacific Railroad (UPRR) has reviewed the DEA for the Price-Stubb Diversion Dam. Our concerns relate to the public access with your preferred alternative with Whitewater Features.

As we understand it, this alternative would require public access on/across UPRR property. This is an unacceptable alternative for UPRR. Any public access across any track in the State of Colorado is under the authority of the Colorado Public Utility Commission (PUC).

The PUC has sole authority to either grant or deny public access across railroads in CO. UPRR will not grant public access across any proposed or existing private road crossings.

In locations throughout the United States, railroads have had serious concerns and issues with public access to rivers, and lakes across active railroad tracks. We believe your preferred alternative will encourage trespassing on UPRR property and we find this unacceptable.

Sincerely,


Susan K. Grabler
Manager Industry & Public Projects

- C: David E. Peterson – Omaha
- Joe Whalen – Denver
- John Matthews – Denver
- Robert Gutierrez – Grand Jct.
- Ray Jantzen – CO PUC

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From: "Frank Bering" <frankbering@bresnan.net>
To: "Bureau of Reclamation" <tstroh@uc.usbr.gov>
Date: 6/3/2004 6:51:53 AM
Subject: Water Park email list

Terry, Thanks very much for an excellent presentation last night. I would like you to add my name to your email list and Susie Attaway asked me to add hers too. frankbering@bresnan.com and attaway03@yahoo.com Thanks again. All the best, Frank

From: "JOHN DALTON" <jdaltonpe@bresnan.net>
To: <tstroh@uc.usbr.gov>
Date: 6/5/2004 2:14:13 PM
Subject: Comment on Whitewater Park

Dear Sirs,

It was my pleasure to attend the public meeting in Palisade this past week. I would like to say that I think the effort put into this project from all entities involved is much appreciated and will hopefully be justified with the construction of an excellent park. It seems to me that everyone is hard with open minds and an end goal in sight.

I have 3 comments to make.

1) I think the whitewater park is an excellent idea that will benefit everyone in the Grand Valley. Business owners, particularly in Palisade, should benefit in general from the increase in tourism. I can envision front range enthusiasts coming to the valley as a destination to kayak the park, mountain bike in Fruita and do some wine tasting. Young people in the valley will benefit by use of the whitewater park because it will give them something healthy and exciting to do. I have been whitewater kayaking steadily since I first moved here in 1982, mostly in Colorado but trips have taken me paddling all over the world. One thing that I have noticed about our whitewater community here in grand Junction is that there is a noticeable lack of young enthusiasts in the Grand Valley as compared to other locations, particularly Glenwood or Durango. I believe that this is mostly due to the fact that if a young person wants to go boating then he/she generally must get a ride from family to a relatively distant location if they are to find any decent waves. Mom will likely be willing to drive junior to the whitewater park with his friends and pick them up a few hours later but it is much less likely that she will take them to Glenwood which is the nearest consistent unpermitted whitewater around. The kids who are likely to take up whitewater as a sport are naturally drawn to excitement, which is a good thing when they have a healthy source for it. It seems to me that in today's world there are too many kids getting bored and the things they end up doing to find excitement often leads them into trouble. A whitewater park addict is the kind of addict the valley could use.

2) The representative from C.D.O.T. discussed a need to spend about \$35,000 to \$40,000 on raising the barrier adjacent to the road so that drivers will not notice the whitewater activities. I am not sure that is something we should be worrying about. Every time I drive Glenwood Canyon I see rafts and kayaks from the road. There are lots of tight turns on that section of highway and there seems to be no problem with accidents. I personally believe a raised barrier for the Price Stubbs turn is not necessary.

3) The present plan proposes two separate channels, one for fish and one for the whitewater park. I fail to see the logic in this. The first justification made at the meeting suggested that the biologists are afraid that boats hanging out in eddies will scare the fish and stress them too much. There are boats hanging out everywhere in our river system and particularly at rapids in the canyons and the fish still pass up and down. I can assure you that shocking each fish twice a year to count them and trapping them in the fish ladders is much more stressful than something floating on the water. When I suggested a single passage at the meeting I was told that it wouldn't work because the water would be too fast and these are low speed fish. After thinking about it for a while, I can not accept that as a valid answer. How do fish get past all the rapids in their migrations? A whitewater park mimics a rapid with natural river features. These endangered fish have survived thousands of years going up and down rapids. It is their natural environment and with proper design of the whitewater aspect they should have no problems. I have trouble believing that the fish can migrate up Cataract and Westwater Canyons but not get up a relatively short whitewater channel. There are many other whitewater parks around the country that double as fish passages. I totally understand and agree with fish ladders at dams and diversions where there is no alternative passage but this is just not the case with a whitewater channel in place.

Conclusion

I am in favor of the project as a single channel fish passage/whitewater park. I don't believe it is realistic

or efficient to have double channels and my biggest concern is that we will waste taxpayer money because of lack of big picture planning by the D.O.W. and B.R. I know fish ladders are necessary at most dams but this is a different scenario and the D.O.W. needs to take a closer look at what they are requiring.

Sincerely,

John Dalton P.E.
489-22.25 Road #1
Grand Junction, CO 81503
970-245-9412

Kayla Dodson & Phil Coebergh
569 1/2 Cindy Ann Rd
From the Desk of

GV, CO
81501

Mr. Philip J. Coebergh '67

June 6, 2004

RE: Fish passage and white water
park east of Palisade, Co,

Dear Mr. Stroh,

We are very in favor of
a fish ladder with a
boating passage or white
water alternative. ~~It~~ It seems
highly practical to have a
recreational benefit that will
in no way harm the
environment and yet could
provide important economic
benefits for the community.

Sincerely,
Kayla Dodson

TRINITY UNIVERSITY

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Dear Sirs,

I am writing to you with my comments and observations on the proposals for the restructuring of the Price Stubbs Diversion Dam. First, I would like to congratulate Mr. T. Strohs for presenting an informative and well balanced meeting. I felt it was an opportunity for all sides to express their concerns and view points. It was certainly nice to attend a public meeting of varied interests without it becoming polarized. Being a homeowner in the valley I found myself agreeing with the water, and could understand agricultures concern on water storage and usage. I could even relate to the railroad's concern about ~~the~~ its road bed since my father was a track man. I had not even considered the point of "who foots the bill" brought up by Search and Rescue.

In my way of thinking,
a recreational, fish ladder,
water storage and hydro electric
dam would be a win, win
situation. I believe that all
concerns brought up can be
economically addressed. Recreational
access can be from Island Lake
to Corn Lake with a pedestrian
path around the dam for kayak
use. Pools to maintain minimum
storage can be added. Even
screening can be put in place ^{on the} ~~to~~
to prevent distraction of
motorists.

The impact and demand
for recreational use cannot
be underestimated. I was
on the boat ramp at Westwater
on the Sunday of Memorial Day
weekend. It was packed until
noon with people going down river,
and then was at capacity from
noon till 4pm with people floating
down from Loma. I even saw
people & news from across the state &

haven't seen in years. Any thing
that broadens the economical base
of this valley can't be ignored
or wasted. if we want to
improve our enjoyment of life
here in the Grand valley

Don Lindmark

From: Brent Uilenberg
To: Terry Stroh
Date: 6/1/2004 2:40:59 PM
Subject: Fwd: Grand Valley River Park

>>> <Boyleengn@cs.com> 5/31/2004 8:35:53 AM >>>

Hi Brent:

We met up at Powderhorn a couple of seasons ago. You were with Terri at the Lodge and I was with Alan and Robbie Koos. I am writing to say I support the Bureau's preferred alternative of the downstream rock fish pasage with whitewater recreational features at the Price-Stubb Diversion Dam near Palisade. I am a local paddler who lives on the river in Palisade, but I will miss the June 2 meeting regarding this matter since I will be out of town. I wanted to drop you this e-mail to voice my support for the Bureau's preferred alternative.

Thanks,
Tim Boyle

From: Brent Uilenberg
To: Terry Stroh
Date: 6/1/2004 2:29:32 PM
Subject: Fwd: Support for Preferred Alternative for Price-Stubb fish Passage

>>> "Barbara Bernhardt" <solituderd@earthlink.net> 5/29/2004 1:34:33 PM >>>

Dear Brian -

Can't attend the meeting the evening of June 2 in Palisade, but wanted to let you know that I am enthusiastic about Alternative #3, which I understand includes the provision of whitewater features along with and in-channel fish ladder at the Price-Stubb dam. I also understand that CDOT is a bit leary of such a feature adjacent to the freeway, but it seems that miles of recreational whitewater along the I-70 corridor in Glenwood Canyon has existed for years without undue safety mishaps, so it seems that this short stretch of similar use would have not different effect. Thanks for your support!

Barbara Bernhardt
solituderd@earthlink.net
Why Wait? Move to EarthLink.

From: "Chris Menges" <cmenges@ahra.salida.co.us>
To: <tstroh@uc.usbr.gov>
Date: 6/14/2004 2:21:57 PM
Subject: Palisade WW Park

Terry,

As both a kayaker and a State Parks employed professional in the conservation and river management field, I would like to voic my support of the Whitewater Park proposal for the Colorado River near Palisade. I also support the in-stream fish ladder. Whitewater parks greatly improve recreational opportunities and have proven to generate positive economic and social impacts on many other towns and counties in Colorado and in other States.

From: "Day, Derek" <Day@cira.colostate.edu>
To: <tstroh@uc.usbr.gov>
Date: 6/14/2004 2:18:57 PM
Subject: White water park on Colorado River near Palisade

Terry Stroh,

I'd like to comment on the proposed Whitewater park on the Colorado River near Palisade. I'm all for it - the BLM preferred plan sounds great to me.

I'm sure if a good whitewater park were built - the boaters would utilize it. This would help the economy of Palisade and I think remove some of the boating pressure on Westwater canyon. Thanks, Derek Day

From: "Chapman, Nathan" <nathanc@amgen.com>
To: "'tstroh@uc.usbr.gov'" <tstroh@uc.usbr.gov>
Date: 6/14/2004 1:18:48 PM
Subject: Price_Stubb Whitewater park and Fish Passage

Hello Terry,

I have heard of your endeavor and would like add my support of the idea to add a kayaker's play park at the same time! I agree that it would greatly enhance the river there, as well as bringing resources to the town of Palisade and nearby. food, gas, lodging, and the possibility of a boating/outfitting store as well. The parks in Golden, Boulder, Steamboat Springs and Lyons are all great additions to an already picturesque lifestyle, I would assume your population would appreciate them as well. I have never seen extra trash generated by the boaters in these areas, as they often work extra hard to help keep things clean (you see it all when you're floating in the water with it all!) , but I have seen the random "guests" that sit along the park be less than careful unfortunately. I would suggest facilities should be provided, to maintain sanitary conditions.

I would be happy to help as I may be able to, just let me know!

thanks for all you're doing!!!
nathan

<<...OLE_Obj...>>
Nathan Chapman
Amgen Inc.
303-401-1492
MS AC24E

From: Brent Uilenberg
To: Terry Stroh
Date: 6/15/2004 8:19:10 AM
Subject: Fwd: Grand Valley River Park

>>> "Tim Walker" <TimWalker@kw.com> 6/14/2004 3:11:58 PM >>>
Dear Brent:

I am a Colorado native and avid kayaker, residing in Colorado Springs. I just learned of the proposed combination of a fish ladder and whitewater park in Palisade. I fully support the combination of functions into one plan. My experience, is that every fall and every spring I make a trip to Westwater Canyon in Utah to paddle and so do many other kayakers. Kayakers will travel to get their fix of whitewater. A year-round whitewater park near Palisade would definitely be a benefit to the overall project scope. In better water years, I've personally made the weekend trip over to experience the Big Sur wave that is upstream from the proposed park. I would love to have an attraction that would take me to the Grand Valley more often. I see nothing but benefits coming from a combined plan.

I support the Grand Valley River Park.

Regards,

Tim Walker
1224 Custer Avenue
Colorado Springs, CO 80903
719-265-0471

From: Ronald Hamblin <ronald.hamblin@sevier.k12.ut.us>
To: <tstroh@uc.usbr.gov>
Date: 6/15/2004 10:05:17 AM
Subject: Price Stubb fish ladder

I would really like to see a kayak park along with the fish ladder. Now I have to drive to Glenwood Spr. (4 hrs.), Green River, Wyo. (6hrs.), or Reno, Nv. (10 hrs) to play on a good wave. I'd spend a lot of time and gas money there. Thanks, Ron Hamblin

From: Susie Attaway <attaway03@yahoo.com>
To: <tstroh@uc.usbr.gov>
Date: 6/15/2004 7:18:16 PM
Subject: Re: whitewater park at Price-Stubbs dam

To the BLM: this is being written to request that you amend the Price-Stubbs dam to a Downstream Rock Fish Passage with Whitewater Recreation Features. This new proposal would address safety issues regarding drowning hazard that are currently in place w/the existing dam. It would enhance the fish passage that is necessary to protect endangered fish species; it would improve and beautify the current entrance into the Grand Valley east corridor near Palisade. In essence, an opportunity to do a number of positive things in one project is presented and should go forth.

Thank you for the opportunity to comment.

Sincerely,
Susie Attaway
2834A Grand Falls Circle
Grand Junction, Co 81501

Do you Yahoo!?
Yahoo! Mail - You care about security. So do we.

From: <DonBettina@aol.com>
To: <tstroh@uc.usbr.gov>
Date: 6/15/2004 6:31:55 PM
Subject: river park

We have vacationed in CO extensively in the past and worked on the Arkansas in '95. A feature like this would definitely be a plus to our return. It would be an excuse to stay some extra time with the additional whitewater recreation that it would provide.

Sincerely,
Bettina George
PO Box 70
Mtn Rest, SC 29664

From: Ed Hansen <kayakguy73@yahoo.com>
To: <tstroh@uc.usbr.gov>
Date: 6/15/2004 2:04:14 PM
Subject: YES to whitewater park.

I am an avid whitewater kayaker who just heard about your proposed whitewater park. I really hope you decided to create the whitewater park beside the fish ladder. Several times a year, I drive I-70 between Utah and the front range. I usually time my fuel/food stop in Fruita, and my play-in-the-river break at Shoshonee near Glenwood Springs.

I didn't realize Palisade was more than a big orchard or something. If there was a whitewater park to stop at, I could add-to or combine my stops on the way across I-70.

I really hope you guys make it, It's hot around there and a one or two hour cool-off with a bite to eat would be a nice break.

Thank you for your time,
Ed Hansen of Florence, Colorado.

From: "Frank Bering" <frankbering@bresnan.net>
To: "Bureau of Reclamation" <tstroh@uc.usbr.gov>
Date: 6/16/2004 7:31:17 AM
Subject: Whitewater Park

Dear Mr. Stroh, Price Stubbs is a World Class site for a whitewater park. I am a senior citizen and would use it often. International and National events could be held there as well as training for the junior teams, Olympic teams, and all classes of kayakers. We may even be surprised that fish might make there way up the Whitewater Course as well as the fish ladder. Best Regards, Frank Bering

UTE WATER CONSERVANCY DISTRICT BUREAU OF RECLAMATION
560 25 Road, P.O. Box 460 WCAO-ND
Grand Junction, CO 81502

Office
Telephone: 970-242-7491
FAX: 970-242-9189

Treatment Plant
Telephone: 970-464-5563
FAX: 970-464-5443
2004 JUN 17 AM 9:50

June 17, 2004

Sue Moyer, Deputy Area Manager
Bureau of Reclamation
Upper Colorado Region
2764 Compass Drive, Suite 106
Grand Junction, CO 81506-8785

Dear Sue:

The Ute Water Conservancy District has the following concerns about the proposed fish passage and whitewater recreation area at the Price/Stubbs diversion dam.

Maintenance of the current minimum water levels.

1. Maintenance of the current minimum water level on the upstream side of the dam is critical to the operations of the Ute Water pump station. Ute Water cannot see any lowering of that water level.
2. Current plans call for the cutting of at least one notch and two notches with the whitewater portion of the project. If these will change the water level Ute must have the ability and the right to put stop logs in the notches whenever required.

Public Safety and liability concerns.

1. Current plans will run the whitewater users on the side of the river next to the pump station. Ute Water does not feel that this is a safe situation.
2. The location is not a spectator friendly area. There is very limited access and no spectator areas. This means that spectators and participants will seek to use the pump station, interstate and the highway bridge as viewing areas.
3. Parking areas within the area are extremely limited. How will parking restrictions be enforced and by whom?
4. Who will indemnify Ute Water in any lawsuits filed because of the whitewater activity?
5. Who will pay any increased insurance costs because of the whitewater activity?

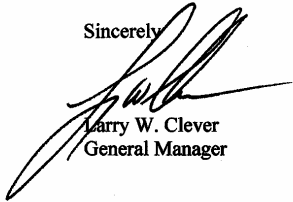
Security concerns: - Security of water systems facilities is of major concern to local, state and federal governments. Who will pay for any increased security costs because of the whitewater activities in the area of the pump station.

General questions:

- What will be the periods of use for the whitewater area?
- Who will police the area to insure that no one trespasses on the pump station?
- What will be the minimum penalty for trespass on the pump station?
- Who will take care of the trash?
- What is the size of the notches?

If you need any further information about our questions and concerns please feel free to call me.

Sincerely,



Larry W. Clever
General Manager

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June 17, 2004

Mr. Terry Stroh
Bureau of Reclamation
2764 Compass Drive
Grand Junction, CO 81506

Dear Mr. Stroh:

Presented here are my comments on the Revised Supplemental Draft Environmental Assessment for the Price-Stubb Fish Passage:

I support the preferred alternative – Downstream Rock Fish Passage with Whitewater Recreation Features. This alternative best resolves the various issues facing this project.

I recommend adding the following two provisions to this alternative:

Provided for the emergency installation of flash boards in each dam cut if low water flows, at some time in the future, prevent Ute Water from making emergency domestic water extraction at their facility just up stream.

In the design, provide for water rescue attachments for use by the Sheriff. These should be provided whether or not the whitewater park is constructed.

Other Comments:

Page 5. River Boating. I recommend the last sentence read “This Draft EA evaluates potential impacts associated with whitewater recreational features designed to enhance river recreation opportunities.” The EA does not evaluate impacts from actions by CDOT.

Page 17. Last paragraph. I believe a 2.5% rock fill would address public recreation safety concerns. I have rafted actively for 10+ years on many rivers in the west and several in the east. Short stretches of 2.5% gradient are common on many rivers and are routinely negotiated by rafters and kayakers.

Page 24. Third paragraph. Second sentence. The latest population information I received from Mesa County in 2002 was 120,000.

Sincerely.

BOB CRON
310 Dakota Drive
Grand Junction, CO. 81503
243-5738

Moyer Letter
June 18, 2004
Page 2

pose a significant safety risk to the public. The area above the dam needed to gain access to the river is limited due to large structures and any access to the river above the dam would also have to go through railroad right-of-way. Encouraging and allowing public access to these areas poses significant public safety risks. No mitigation measures have been considered or provided to lessen the risk. The RSDEA does not discuss the public safety issue of additional public foot access in the area around the dam. In addition, the RSDEA did not address emergency service response or rescue features to be included as part of the preferred alternative.

The issues pertaining to the maintenance and liability associated with the recreational features have not been adequately addressed in the RSDEA. On Page 19, the RSDEA states that "recreational interests and possibly the Town of Palisade would provide maintenance, as needed, for the whitewater features including but not limited to removing trash and debris, and adjusting and/or resetting boulders after large flow events". CDOT can only enter into intergovernmental agreements with other governmental agencies and in this case the other governmental agency must assume maintenance and liability responsibilities.

CDOT, in consultation with FHWA, believe that the RSDEA would be adequate for approval of a fish passage within I-70 R.O.W with no whitewater features. The inclusion of whitewater features will require additional evaluation of impacts and mitigation for the issues described in our previous correspondence. CDOT also supports removal of the dam hazard to boating with the inclusion of a 4:1 grouted riprap slope shown in the fish passage only alternative.

If you have any questions please feel free to contact me at 970-248-7223.

Sincerely,



Tamara J. Smith
CDOT, Region 3
Planning/Environmental Manager

cc: Fink
Perske
FHWA: Ladow/Speral
file

From: Pete Winn <petewinn@shangri-la-river-expeditions.com>
To: <tstroh@uc.usbr.gov>
Date: 6/18/2004 1:00:08 PM
Subject: Comments on Price-Stubb Fish Passage Revised Supplemental Draft Environmental Assessment

Terry Stroh
US Bureau of Reclamation
Upper Colorado Region
Western Colorado Area Office
2764 Compass Drive
Grand Junction CO 81501

Re: Price-Stubb Fish Passage Revised Supplemental Draft Environmental Assessment (EA)

Dear Sirs/Ms:

Representatives of the WATER Club and the Grand Valley River Park Foundation have worked hard for many years to

gain approval for a whitewater park at the Price-Stubb Dam. We have sought support from the Bureau of Reclamation,

Town of Palisade, Mesa County, US Fish & Wildlife Service, Palisade and Mesa Irrigation districts (the owners of the

dam), Jacobson Hydro-West (land owner on river right), the Colorado Riverfront Commission (which donated \$32,500

towards engineering and construction), the Colorado Department of Transportation (owner of the land below the river)

and many other agencies, businesses, organizations and individuals. The preferred alternative in the draft EA is an

indication that our efforts are being rewarded.

We agree that the preferred alternative, in-channel fish passage with whitewater features, is the best alternative for these

reasons in addition to those listed in the EA:

1) If the US Bureau of Reclamation is authorized to spend about \$4 million in taxpayer money on endangered fish, it

really makes sense to let recreation users raise an additional 12% from private and lottery sources for their own benefit.

2) Over the past twenty or thirty years, the Grand Valley has produced some pretty talented boaters. Today we have two

girls on the US Junior Olympic team, but they have to travel to Glenwood or Golden to train, then they'll leave the valley

when they graduate from high school. We can build a world class whitewater park at Price-Stubb that will allow Grand

Valley youth to train locally and that will attract talented boaters from out of town, some of whom will decide to move

here because of the park.

3) Other cities have benefited economically from whitewater parks, and Palisade will also benefit. Golden is so happy

with their park they've added to it over the years, and other cities are building new ones to take advantage of the growing

number of boaters in Colorado.

4) If the whitewater park is not built, the alternative will be a riprap ramp that could be hazardous, especially at high

water. Some boaters will try to run it anyway, and for safety it's much better to funnel the water into a channel with man

made whitewater features that are designed to be safe at all river levels for a variety of skill levels.

5) The Bureau makes the distinction between a whitewater park, which requires land access on river right, and the

downstream rock passage with whitewater recreational features, which only includes features in the river itself and

requires land access at Island Acres State Park about three miles upstream. They hint that a whitewater park is a good

idea because if the Colorado Department of Transportation does not allow land access at the site, boaters will be

tempted to park along the freeway on river left to access the fish ladder, which is far more dangerous than allowing land

access on river right. We strongly support land access on river right approach and believe that it should be included in the

construction plans.

Regarding issues of concern that have been expressed by others:

1) If a whitewater park notch was cut in addition to the fish passage notch, the level of water in the pool one-half mile

above the dam at low flows might be too low for the Ute Water emergency pump to operate properly. The Bureau's

studies indicate a drop of 2 to 3 inches at the dam would not significantly affect the water level at the Ute pump, and it

offered to provide its documentation to Ute Water engineers for review.

2) The site is near a hazardous 50 mph curve and the Colorado Department of Transportation indicated about \$35,000

would need to be spent to extend a four foot high barrier on the river side of the freeway to block views of the site.

According to the Colorado State Patrol, in Glenwood Canyon, where I-70 has so many sharp curves that there is a 50

mph speed limit for the entire twelve mile stretch, there are four times as many accidents in the winter, when there aren't

any boaters, as there are in the summer, and there isn't any stretch of road with a four foot high barrier. At Big Sur, a

wave train which appears in very high water years just west of the western-most tunnel on I-70 in Debeque Canyon,

there were no accidents when there were dozens of boaters surfing the waves from mid May to mid June, 1997 (and no

4 foot high barrier). Clearly, bad road conditions cause a lot more accidents than colorful boats on the water. But if

adding 1000 feet of four foot barrier is what it takes to get the support of CDOT, we'll try to find the money. Hopefully,

either Fish Passage funds or the GOCO grant we are hoping to obtain will cover this cost.

3) It will be necessary to obtain recreational easements from the five property owners to gain access on river right: the

railroad, CDOT, Jacobson Hydro-West, and Palisade and Mesa County irrigation companies. Preliminary discussions

indicate this is feasible.

4) It is inevitable that more people mean more trash, and a couple of Palisade residents are concerned about who will

pay for trash clean-up. Also, parking and toilet facilities are related concerns. Having proper land access should mitigate

these concerns. Increased tax revenues to the town of Palisade will more

than compensate the Town for providing

services at the whitewater park as part of their existing park program.

5) The recreation community does not yet have the \$400,000 estimated by the Bureau for engineering and construction.

We intend to obtain it from a GOCO grant, which is not a certainty. However, other towns have been successful in using

GOCO funds, and this project certainly qualifies, so we are optimistic that we will succeed.

Sincerely,

Pete Winn

Co-chairman, Western Association to Enjoy Rivers (WATER) Whitewater Park
Committee
P.O. Box 2151
Grand Junction CO 81502

Director, Grand Valley River Park Foundation
418 S. 7th, Grand Junction, CO 81501



REC'D JUN 18 2004

RIVERFRONT COMMISSION

P.O. Box 2477
Grand Junction, Colorado 81502
(970) 245-0045

Sponsors:
Fruita
Grand Junction
Mesa County
Palisade

June 18, 2004

Terence Stroh
Bureau of Reclamation
Western Colorado Area Office
2764 Compass Drive
Grand Junction, CO 81506

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RECEIVED BOR W.C.A.O.
NORTHERN DIVISION
JUN 21 2004
CLASS ENV 700
PRJ. 22V
CNTR. 1000863
FLDR. 4085
Table with columns: CLASS, INITIALS, SURNAME

Dear Mr. Stroh:

We would like to express the support of the Colorado Riverfront Commission for the endangered fish passage at the Price-Stubb dam. In particular, the Commission endorses the Preferred Alternative described in the recent revised Environmental Assessment on the fish passage, the Downstream Rock Fish Passage with Whitewater Recreational Features Alternative.

The Colorado Riverfront Commission was founded in 1987 for the reclamation and preservation of the entire reach of the Colorado and Gunnison Rivers in Mesa County in order to improve wildlife habitat, to maintain open space within the river corridors and to enhance the rivers' potential for recreation and environmental education. The Preferred Alternative is in concert with key elements of our founding mission in that it not only will increase the range of several endangered fish species, but will at the same time provide an important addition to the river's recreation potential.

The Commission has supported earlier projects of the recovery plan for the endangered fish of the Colorado River and will continue to support efforts toward their recovery. We have also collaborated with the partnership that is attempting to raise funds for construction of the water park at the fish passage and will continue in the effort to make the water park a reality. In addition to providing a wonderful recreation opportunity for Colorado boaters, it will surely benefit the community of Palisade.

Thank you for the opportunity to provide comment.

Sincerely,

Handwritten signature of Mark Gardner

Mark Gardner
Co-Chairperson
Colorado Riverfront Commission

Handwritten signature of Paul Jones

Paul Jones
Co-Chairperson
Colorado Riverfront Commission

REGION

REGION 10 LEAGUE FOR ECONOMIC ASSISTANCE AND PLANNING, INC.

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NORTHERN DIVISION

JUN 21 2004

CLASS ENV 700
PRI. SV
CNTR. 1000362
FLDR. 1000362

CLASS	INITIALS	SURNAME

Mr. Terry Stroh
Bureau of Reclamation
2064 Compass Dr.
Grand Junction, CO 81501

Dear Mr. Stroh:

Delta County
City of Delta
Town of Cedaredge
Town of Crawford
Town of Orchard City
Town of Hotchkiss
Town of Paonia

I am writing in regards to the Revised Supplement Draft of the EIS for the Price/Stubbs Fish passage in Palisade. I recommend that the BOR select its preferred alternative- "Downstream Fish Passage with Whitewater Recreation Features" as the final alternative.

Gunnison County
City of Gunnison
Town of Mt. Crested Butte
Town of Crested Butte

The ability to turn the current structure into a wildlife/recreation friendly facility makes both economic and environmental sense. The whitewater facility will attract many recreational users from the Telluride, Ouray, Ridgeway, Montrose, Delta, Grand Junction and Moab areas. Whitewater parks have proven time after time to be a valuable community asset!

Hinsdale County
Town of Lake City

Thank you for your time and please let me know the final decision of the BOR.

Montrose County
City of Montrose
Town of Naturita
Town of Nucla
Town of Olathe

Yours,



Lee Bartlett
AAA Coordinator
Region 10

Ouray County
City of Ouray
Town of Ridgeway

San Miguel County
Town of Telluride
Town of Mountain Village
Town of Norwood



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NORTHERN DIVISION

JUN 25 2004

CLASS *ENV 100*
PRJ. *200*
CNTR. *1000*
FLDR. *100*

CLASS	INITIALS	SURNAME
		<i>S. Moyer</i>

June 22, 2004

SUE MOYER
DEPUTY AREA MANAGER
UNITED STATES DEPARTMENT INTERIOR
BUREAU OF RECLAMATION
2764 COMPASS DRIVE, SUITE 106
GRAND JUNCTION CO 81506-8785

Re: Providing Endangered Fish Passage at the Price-Stubb Diversion Dam on the Colorado River

Dear Ms. Moyer:

I am in receipt of your May 17, 2004 cover letter and Revised Supplemental Draft Environmental Assessment for the Price-Stubb Fish Passage. I would like to state for the record that the Union Pacific Railroad Company has legitimate safety concerns with the Plan proposed by the Bureau of Reclamation and will do everything in its power to fight its implementation.

It is my understanding that as part of this Plan, the Bureau of Reclamation would also like to allow the use of the Railroad's right-of-way as a point of access to a proposed whitewater park at the dam site. For safety reasons, the Railroad will not allow this type of use on its right-of-way. The proposed use by the Bureau would bring a large number of vehicles and pedestrians in close proximity of the Railroad's main line track. Therefore, the Railroad must decline any request for public access along its right-of-way.

If it is necessary to discuss this in more detail or schedule a meeting, call me at (402) 997-3552.

Yours truly,

Gregg A. Larsen
GREGG A. LARSEN

MANAGER - REAL ESTATE

Approved by Law 05/11/00

Real Estate

UNION PACIFIC RAILROAD
1800 Farnam Street, Omaha, Nebraska 68102
fx. (402) 997-3601

STATE OF COLORADO

DEPARTMENT OF TRANSPORTATION
Region 3

222 South Sixth Street, Room 317
Grand Junction, Colorado 81501-2769
(970) 248-7225 FAX# (970) 248-7254



August 30, 2004

Town of Palisade
Attn: Tina Darrah
P.O. Box 128
Palisade, CO 81526-0128

RE: Whitewater Park East of Palisade

Dear Ms. Darrah:

Thank you for coordinating the August 24, 2004 meeting concerning the proposed Whitewater Park east of Palisade. The Colorado Department of Transportation (CDOT) has been working with the Bureau of Reclamation (BOR), the Town of Palisade, and numerous other interested parties to accommodate safe public use of this portion of the Colorado River within the I-70 right of way (ROW).

CDOT does support the Town of Palisade GOCO application to fund the construction of a Colorado River whitewater park and whitewater river features. CDOT and the Federal Highway Administration (FHWA) can authorize construction of the whitewater features in the I-70 ROW if Palisade can secure public access along the Union Pacific Railroad ROW and provide safety measures for I-70 traffic. Palisade and the BOR are proceeding to acquire the necessary easements and agreements to develop, own, and operate the whitewater park and will finalize the project design as we outlined in our meeting.

CDOT and FHWA must review and approve final plans and develop an Intergovernmental Agreement with Palisade prior to approving construction of the recreation facility. We are aware that the schedule and timelines for this project are linked to the BOR endangered fish passage project and will work diligently to support them. However, we do recommend that Palisade and the BOR initiate requests for an IGA and permit approvals as soon as the project design, property acquisition, and easements are completed.

Sincerely,



Ed Fink
Director, Transportation Region 3

cc: Perske
Roussin
FHWA: Ladow/Speral
file