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United States Department of the Interior
Bureau of Reclamation
Western Colorado Area Office
Grand Junction, Colorado

FINDING OF NO SIGNIFICANT IMPACT

Endangered Fish Passage at the Grand Valley Project Diversion Dam and Fish Screen in the Government Highline Canal

In accordance with the National Environmental Policy Act of 1969, as amended, and the Council on Environmental Quality's Regulations for implementing the procedural provisions of the National Environmental Policy Act (40 CFR Part 1500-1508), the Bureau of Reclamation (Reclamation) has prepared an Environmental Assessment (EA) for Endangered Fish Passage at the Grand Valley Project Diversion Dam and Fish Screen in the Government Highline Canal. The EA assesses three alternatives for restoring endangered fish passage: 1) No Action, 2) Rock Fish Passage, and 3) Concrete alternatives. Included in the Rock and Concrete Fish Passage alternatives are Fish Screen Alternatives for the Government Highline Canal. Fish Screen alternative sites include 1) at the Diversion Dam's head works, 2) above the Cameo Generating Station, and 3) below the Cameo Generating Station. The proposed action would construct a concrete fish passage through the Grand Valley Diversion Dam and construct a fish screen in the Government Highline Canal approximately one mile downstream of the Grand Valley Project Diversion Dam. Based on the following, Reclamation has determined that the proposed action with implemented mitigation measures would not result in a significant impact on the human environment.

In 1987, Federal and State agencies, water users, and environmental groups established the Upper Colorado River Endangered Fish Recovery Program (Recovery Program). The Recovery Program is comprised of a partnership between the States of Colorado, Utah and Wyoming, Reclamation, U.S. Fish and Wildlife Service (Service), Western Area Power Administration, National Park Service, Colorado River Energy Distributors Association, Colorado Water Congress, Utah Water Users Association, Wyoming Water Association, and the Nature Conservancy.

Recovery Program elements include:

1) Habitat management including identifying and acquiring instream flows, changing operations of Federal dams, and operating other reservoirs in a coordinated manner to benefit endangered fish.

2) Habitat development including restoring floodplain/wetland habitats and constructing fish passageways around dams and other barriers in the river.

3) Native fish propagation and genetic management involving establishing facilities to hold adult

broodstock to prevent extinction of these rare fish and maintain their genetic resources; develop growout ponds; conduct research to improve survival of endangered fish raised in captivity and stocked in the wild; and support appropriate stocking and reintroduction efforts.

4) Nonative species and sportfishing entailing managing detrimental nonnative fish species in habitat considered "critical" to endangered fish. This also involves educating and distributing information to anglers to reduce accidental capture of endangered fish.

5) Research, monitoring and data management providing information about what these fish need to survive, grow, and reproduce in the wild. Efforts include compiling data on numbers, sizes, and locations of endangered fish; monitoring endangered fish population trends; and making river flow recommendations.

The Recovery Program has identified a need to restore endangered fish access to critical habitat upstream of the Grand Valley Project Diversion Dam and to make sufficient progress toward establishing self-sustaining populations of the endangered fishes. The Service's "15-Mile Reach" Programmatic Biological Opinion identified the fish screening of the Government Highline Canal as a reasonable and prudent measure to reduce incidental take associated with the Grand Valley Project. The purpose of the fish passage and fish screen is to further the goals of the Recovery Program.

In March 2002, Reclamation distributed for public comment a draft EA for providing endangered fish passage at the Grand Valley Project Diversion Dam and fish screening of the Government Highline Canal. The draft EA contained the alternatives described above. In the draft EA, the Rock Fish Passage Alternative with the Below Cameo Fish Screen Alternative was identified as the Preferred Alternative. Comments were received from 10 agencies, organizations and individuals.

The comments were addressed and a Final EA was prepared. After additional design review, Reclamation has selected **Concrete Fish Passage Alternative** with the **Above Cameo Fish Screen Alternative,** as the recommended alternative.

With the selection of the Concrete Fish Passage Alternative, Reclamation would construct a concrete fish passage through the left[a] roller bay of the Grand Valley Project Diversion Dam. The fish passage would be designed to use a maximum of 135 cfs of Colorado River flow to operate the passage. A fish trap would be installed at the fish passage exit to provide selective passage, which would prevent nonnative fish movement upstream. The U.S. Fish and Wildlife Service would operate the fish passage and fish trap. Maintenance activities associated with the fish passage, would be performed by the Grand Valley Water Users Association under their existing operation and maintenance agreement for the Grand Valley Project, and incorporated as a project feature.

With the selection of the Above Cameo Fish Screen Alternative, Reclamation would construct a "w-type" fish screen in the Government Highline Canal approximately 1-mile downstream of the

[a] Left as when facing downstream of the Diversion Dam.

Grand Valley Diversion Dam. A canal bypass channel capable of carrying the canal capacity of 1,620 cfs would be included in the fish screen design. A fish return pipeline, which would return fish and debris to the Colorado River, would be designed to use approximately 50 cfs of water. This 50 cfs would be diverted at the Diversion Dam in addition to the normal 1,620 cfs summer and 800 cfs winter diversions. The fish screen would be operated and maintained by the Grand Valley Water Users Association through their existing operating and maintenance contract for the Grand Valley, and incorporated as a project feature.

Conclusions:

Under the No Action Alternative, endangered fish passage upstream of the Grand Valley Project Diversion Dam would not be restored and endangered fish entrainment in the Government Highline Canal would continue. This would not meet the purpose and need as described above. Under the Selected Alternative, Reclamation would construct a fish passage and fish screen that meets the endangered fish needs while allowing continued diversions and use of the Colorado River for Grand Valley Project authorized purposes.

In terms of environmental consequences associated with implementing the recommended alternative, there would be no effect on water uses or rights. If flow in the Colorado River is insufficient to meet the requirements for fish passage and fish screen operations and Grand Valley Project water entitlements, fish passage and fish screen operations could discontinue until flows meet entitlements. Fish passage operations would first be discontinued and if necessary, fish screen operations would be discontinued. Indian trust assets, recreation, and environmental justice would not be affected by the recommended action.

Reclamation will comply with the National Historic Preservation Act (NHPA) and other cultural resource requirements before features of the project are implemented. Construction of the fish passage through the left roller bay of the Grand Valley Project Diversion Dam would have an adverse effect on the historical values of the Dam. The Dam is listed on the National Register of Historic Places for its design and engineering values. Consultation between Reclamation and the Colorado State Historic Preservation Officer (CSHPO) will lead to the development, signing and implementation of a Memorandum of Agreement (MOA) that will identify appropriate mitigation and methods to minimize impacts to the Dam's visual characteristics and design and engineering values. The mitigating measures will be completed prior to initiating construction of the fish passage. The Advisory Council on Historic Preservation was notified of the adverse effect the construction of the fish passage would have on the historic properties of the Grand Valley Diversion Dam. The Advisory Council has elected not to participate in the MOU process.

The Government Highline Canal is eligible for listing on the National Register of Historic Places. During consultation with the SHPO, it was determined that the construction of a fish screen in the Government Highline Canal would not adversely affect the canal's eligibility for listing. Archeological survey of the area of potential effect revealed no additional significant resources.

The footprint of the Concrete Fish Passage Alternative is within the floodplain of the Colorado

River, where there is a negligible likelihood that cultural resources will occur; however, this area will be inventoried prior to construction.

Permits and access agreements would be obtained from Union Pacific Railroad, Colorado Department of Transportation, the adjacent landowners, and other affected parties to construct, operate and maintain the fish passage and fish screen. Permit conditions would be incorporated as environmental commitments.

A mature peach orchard, approximately 6 acres in size, on Reclamation lands would also be affected by the construction of the fish screen. The orchard has been classified by the Natural Resource Conservation Service as Prime and Unique Farmland. Reclamation has worked with the adjoining landowners to minimize impacts to the orchard. Reclamation has reduced the percentage of affected orchard from about 20 percent to less than 10 percent (50 trees). Under a License Agreement with Herbert and Thelma Hays (adjacent landowners), Reclamation issued a "life-estate easement" to the Hays for continued use of the orchard. Reclamation received from the Hays: 1) a life estate for about 1.2 acres of adjoining land for use as a construction staging area, 2) a 150-ft temporary construction easement, and 3) a 50-ft permanent pipeline Right-of-Way. A total of 50 peach trees would be removed under the agreement. Reclamation would be required to provide fair compensation for any peach tree losses that exceed the initial 50 trees.

Water quality and wildlife may be affected during construction, however impacts are projected to be short-term in duration and not significant. Water Quality Certification would be obtained from the Colorado Department of Public Health and Environment prior to construction. Best management practices will be implemented to protect water quality.

Disturbance to wetlands would be approximately 0.5 acres and authorization from the Army Corps of Engineers under Section 404 of the Clean Water Act would be obtained prior to construction. Permit conditions would be environmental commitments. Reclamation would mitigate wetlands losses at a ratio of 2:1 by developing 1.0 acre of wetlands/riparian habitat at either the DeBeque or Grand Junction Wildlife Areas.

Construction of the fish passage (November 2003 through February 2004) would prohibit winter power diversions for one season to the Grand Valley Power Plant. This would result in the loss of approximately $60,000 in power revenues to the Grand Valley Water Users Association and the Orchard Mesa Irrigation District. The Recovery Program has not authorized payment for power interference; therefore the entities would not receive compensation for the loss of power revenue during construction of the fish passage and fish screen. If power revenue sharing entities want to request reimbursement, they should approach the Upper Colorado River Endangered Fish Recovery Program's Management Committee. Xcel Energy also has a contract with the United States Government for non-consumptive use of about 70 cfs of water from the Government Highline Canal for cooling at the Cameo Generating Station. The 70 cfs of non-consumptive use water would also not be available during the construction of the fish passage. Xcel has developed alternative methods for cooling at the Cameo Generating Station and operations would not be affected by the 4-month canal outage.

During consultation with the Service (Consultation Number ES/GJ-6-CO-99-F-033-CP016), the Service concurred with a determination that the proposed project would have "no effect" on the bald eagle, southwestern willow flycatcher, humpback chub, and Uinta Basin hookless cactus. The consultation also determined that the proposed project is not likely to jeopardize the continued existence of Colorado pikeminnow, razorback sucker and bonytail, and is not likely to destroy or adversely modify designated critical habitat. The recommended alternative would restore endangered fish passage above the Grand Valley Project Diversion Dam while precluding non-native fish (beneficial effect); however incidental take may occur while constructing and operating the fish passage. In addition, the Service determined that incidental take may occur during the construction and operation of the fish screen. The Service authorized incidental take as defined in the December 20, 1999 Programmatic Biological Opinion (PBO) for "Bureau of Reclamation's Operations and Depletions, Other Depletions, and Funding and Implementation of Recovery Program Actions in the Upper Colorado River above the Confluence with the Gunnison River"(1999 PBO). Incidental take was authorized in the amount of 1 percent of the latest adult Colorado pikeminnow and razorback sucker populations above Westwater Canyon.

The Service also reiterated the following terms and conditions to carry out the reasonable and prudent measures identified in the 1999 PBO:

1. The Recovery Program will develop an appropriate design for fish preclusion devices that are compatible with the operation of the subject facilities.

2. Fish preclusion devices to prevent or reduce adult and sub adult fish (>300 mm total length) from entering the canals within the time frame outlined in the Recovery Action Plan will be constructed by the Recovery Program.

3. If another existing water delivery system between Rifle and the 15-Mile Reach is found to result in take that may cause the incidental take limit to be exceeded, then the Recovery Program will design and construct fish preclusion devices to prevent of reduce adult and sub adult (>300 mm total length) from entering that facility.

4. A plan to monitor the amount of take will be developed by September 30, 2001, by the Recovery Program and added to the Recovery Action Plan.

The Service also determined that water depletions associated with the Grand Valley Project are interdependent on the proposed action because they rely on the recovery actions outline in the 1999 PBO to avoid jeopardy and adverse modification of critical habitat to the endangered fishes. The 1999 PBO addresses all historical depletions; therefore, it includes the water depletions associated with the Grand Valley Project (approximately 62,508 acre-feet/year) and the following mentioned water user entities entered into recovery agreements. Therefore, all requirements for their water depletions under the umbrella of the 1999 Programmatic Biological Opinion are met.

Grand Valley Water Users Association
Orchard Mesa Irrigation District
Palisade Irrigation District

Mesa County Irrigation District
Xcel Energy (formerly known as Public Service Company of Colorado)

The above entities signed recovery agreements which were sent to the Service, and the Service provided documentation to Reclamation and the subject water entities that the fish passage and fish screen project may rely on the incidental take statement in the 1999 PBO to be exempted from the prohibitions of section 9 (take) of the Endangered Species Act.

Environmental Commitments

Reclamation shall conduct inventories on areas of potential effect (wetlands, temporary roads, borrow areas, etc.) which have not yet been identified but which may be needed for the project and comply with NHPA, 36 CFR Part 800, and Reclamation policy regarding these additional areas of impact.

Reclamation has initiated consultation with the CSHPO and other interested parties, to develop and evaluate alternatives that would avoid, minimize or mitigate adverse effects on historic properties within the area of potential effects. This commitment will be formalized in a memorandum of agreement with the CSHPO.

All permits and contracts would have "stop work" clauses in the event that cultural or palentological resources are found during construction. Construction will be resumed in the vicinity of discovered resources only after Reclamation complies with the inadvertent discovery provisions of NHPA, the Archeological Resource Protection Act, the Native American Graves Protection and Repatriation Act, and other applicable requirements.

All permits and contracts would have "stop work" clauses that would require the contractor to stop construction activities if a threatened or endangered species is encountered. If this would occur, construction would be halted until consultation with the Service was completed.

All temporary roads, access points and waste sites would be recontoured and reseeded to reduce erosion. All contract specifications would include provision to reduce erosion, restore landscapes, and provide for revegetation. Reasonable attempts would be made to avoid the loss of mature cottonwood trees. In the event a mature cottonwood tree would be lost as a result of construction activities, the tree would be replaced with a planting ratio of 10 seedlings per mature tree.

Reclamation would minimize impacts to Prime and Unique Farmland as described in the March 12, 2003 License Agreement entered into by Reclamation and Herbert and Thelma Hays. Reclamation would minimize the amount of trees removed during fish screen construction, and provide fair compensation for trees removed beyond the initial 50 identified in the agreement. The agreement also establishes a life-estate easement between Reclamation and Mr. And Mrs. Hays to allow continued farming on Reclamation property while proceeding with construction, operation and maintenance of the fish screen in the Government Highline Canal.

Endangered and native fish species would benefit from restored fish passage by providing access to additional habitat upstream of the Grand Valley Project Diversion Dam. Restricting movement and removal of non-native fish species using a selective fish passage would also benefit endangered and native fish species.

The fish passage and fish screen would be operated under existing agreements with the Grand Valley Water Users Association for the operation and maintenance of the Grand Valley Project. When Colorado River flows above the Grand Valley Project Diversion Dam are not sufficient to divert a full canal supply into the Government Highline Canal (1,620 cfs), the Grand Valley Water Users Association after discussions with Reclamation and the Service, may elect to temporarily cease fish passage and fish screen operations.

The fish screen would be operated from April through October each year (Irrigation Season). If winter conditions permit, the fish screen operation may be extended. The canal bypass channel will only be used when fish screen maintenance is needed during the irrigation season and during the winter power diversion season (November through March) if icing conditions prevent operation of the fish screen. When the fish screen is clean and functioning properly, the canal bypass channel will be closed and the fish return pipeline operated.

Based on a review of comments received, analysis of environmental impacts, and coordination with the Service under the Endangered Species Act, Reclamation concludes that implementation of the recommended fish passage and fish screen with implementation of the above described mitigation, would not have significant impact on the quality of the human environment or the natural resources in the project area.

This Finding of No Significant Impact has, therefore, been prepared and is submitted to document environmental review and evaluation of the proposed action in compliance with the National Environmental Policy Act of 1969, as amended.

Prepared By:
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Terence L. Stroh, General Biologist Date

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Stephen McCall, Environmental Protection Specialist Date

Approved By:
Signed-Carol DeAngelis *03-27-03*
Carol DeAngelis, Western Colorado Area Manager Date

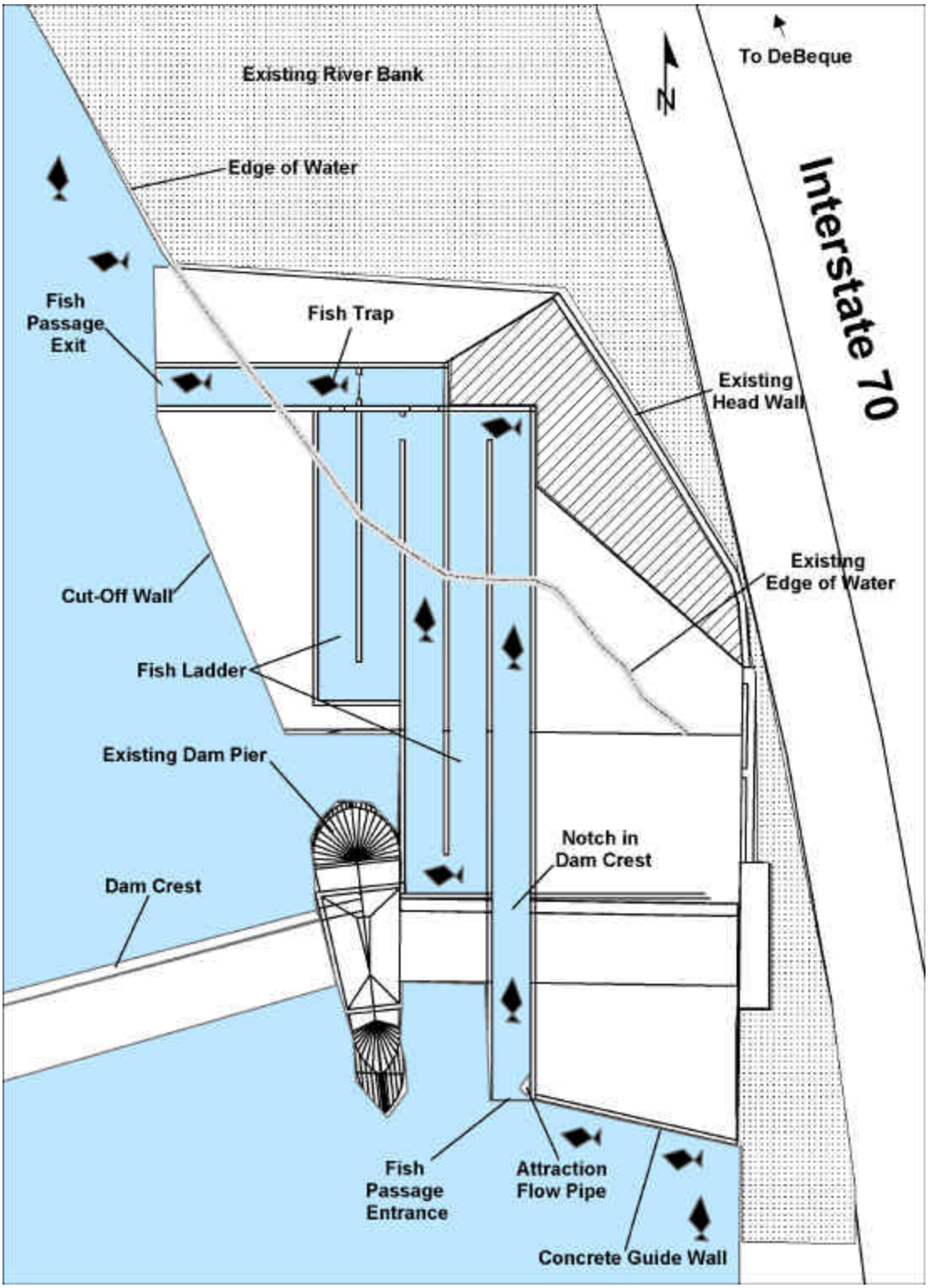

Figure 1 - Downstream Rock Fish Passage Alternative

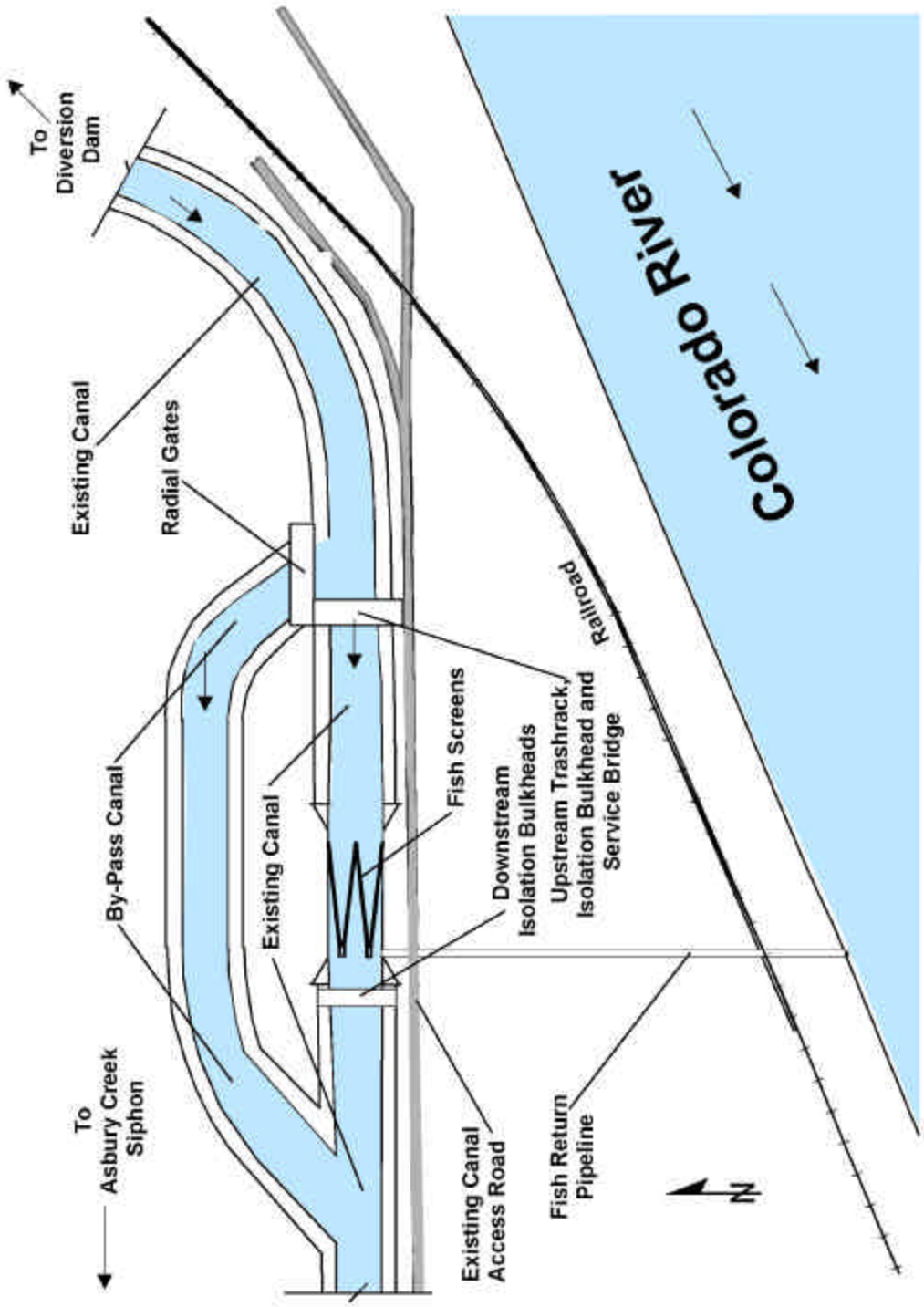

Figure 2 - Above Cameo Fish Screen Alternative