



US Army Corps  
of Engineers

Sacramento District  
1325 J Street  
Sacramento, CA 95814-2922

# Public Notice

Public Notice Number: 200275143

Date: April 9, 2002

Comments Due: May 9, 2002

In reply, please refer to the Public Notice Number

## TO WHOM IT MAY CONCERN:

**SUBJECT:** Application for a Department of the Army permit under authority of Section 404 of the Clean Water Act (CWA) and for water quality certification under Section 401 of the CWA to discharge fill into the Colorado River in conjunction with construction of the Grand Valley Diversion Dam Fish Passage Project, as shown in the attached drawings.

**APPLICANT:** Mr. Michael Baker  
Bureau of Reclamation  
2764 Compass Drive  
Grand Junction, CO 81502-

**LOCATION:** Approximately 5 miles east (upstream) of the Town of Palisade, on the Colorado River, adjacent to Interstate Highway 70, Section 13, Township 98 West, Range 10 South, Mesa County, Colorado. Please see Figure 1, Location Map.

**PURPOSE:** To allow the Colorado pike minnow, and the Razorback sucker, endangered fish species, to access about 50 miles of critical habitat upstream of the Grand Valley Diversion Dam. This project will aid the recovery of the endangered fish.

**PROJECT DESCRIPTION:** The project will consist of modifying the easternmost roller bay of the Grand Valley Diversion Dam to allow fish to enter an approximately 660-foot long fish passage channel, sloped at about a 2.5% grade. The fish passage channel will be available for fish migration past the diversion dam, to the upstream reach of the river. The construction of the fish passage will require placement of materials into about 2.6 acres of wetland dominated by canary reed grass (*Phalaris arundinacea*). The fish passage location is constrained to the east side of the river since the intake structure of the Government Highline Canal is located on the west side of the river. Wetlands adversely impacted would be replaced at a nearby off-site location. A temporary cofferdam would be installed to allow construction to proceed in a dewatered environment.

The existing 14-foot high Grand Valley Project Diversion Dam, (See Figure 2, Plan View) was constructed from 1912 to 1917, to divert flows from the Colorado River to the Government Highline Canal (GHC). The GHC services four canals that stretch more than 90 miles within the Grand Valley. The dam consists of six bays, each containing a 7 foot diameter roller gate, each

about 70 feet long. These gates are raised and lowered in combinations to control the upstream water surface elevation regardless of the flowrate in the river. This important dam along with two other diversion dams in the vicinity block the passage of fish. The Price-Stubb Diversion Dam presently is being considered for partial removal to restore fish passage. The Grand Valley Irrigation Company Diversion Dam already has a fish passage constructed below it.

Fish passage construction would require the existing southern roller bay of the Grand Valley Project Diversion Dam be modified to allow both entry by downstream fish, and the installation of the downstream end of the fish passage channel. The bay is expected to pass about a 2-foot minimum depth of water, with a flowrate of 130 cubic feet per second (cfs). The base width of the trapezoidal fish channel is 10 feet (See Figure 3, Plan Detail). A concrete cutoff wall will separate the fish passage channel from the main flow of the river. Operation of the fish channel will be dependent on the available river flowrate and upstream water surface elevation. Fish passage features include boulders to allow fish resting areas, possibly a fish trap to control upstream movement of nonnative fish, and a trash rack above the passage to filter debris and ice. The facility would be fenced for safety.

The wetland upstream and along the east side of the river is about 6.5 acres in size. About 2.6 acres of this wetland area is required for the installation of the fish passage. The subject wetland area is confined to the upstream portion of the river, and is nearly level with the normal pool elevation above the dam. Wetland loss will be compensated by creation of 3.26 acres of wetland at the nearby DeBeque Wildlife Area (See Figure 1, Location Map). The primary function of the wetland in the project area is water polishing. Less than half of that wetland will be lost. The proposed wetland compensation at the DeBeque Wildlife Area will utilize both irrigation return flows as well as river water. Therefore the function of the lost wetland will be replaced with greater value, due to the increased size of the replacement wetland, and additional wildlife habitat value (See Figure 4, Wetland Mitigation Area).

**ALTERNATIVES:** The Bureau of Reclamation developed three alternatives: (1) No Action Alternative, (2) Upstream Rock Fish Passage Alternative, and the (3) Downstream Concrete Fish Passage Alternative.

The No Action Alternative provides for Reclamation to take no action to provide for endangered fish passage at the dam. The dam would remain unaltered and continue to be a barrier to upstream fish passage.

The Upstream Rock Fish Passage (See Figure 3, Plan Detail) would be built through the dam roller bay closes to the left (east) bank of the Colorado River, adjacent to Interstate 70. A cutoff/retaining wall built of concrete, sheet pilings or a combination of both, would be constructed for the length of the passage to protect the passage during high river flows. Boulders would be placed in the passage channel to create low velocity resting areas for the fish. A fish trap (selective passage) to control upstream movement of nonnative fish may be included. A trash rack and fencing would be part of the design. The fish passage is designed for a flow of 130 cfs, and to maintain a minimum water depth of 2 feet.

The Downstream Concrete Fish Passage alternative would also be built through the dam roller bay on the east side of the river. The passage would consist of a 200 to 300 foot long concrete

channel, 6 to 8 feet wide. The water depth would be about 5 or 6 feet in the channel whose sides would vary from 6 to 20 feet in height. The flowrate would be about 130 cfs. Baffles (vertically placed plates) would divide the channel into a series of small pools; the fish would swim from pool to pool through openings in each baffle. The passage would include a trash rack and fencing for safety, and possibly a fish trap for selective passage.

The Upstream Rock Fish Passage has been identified as the preferred alternative because:

- (1) It is more natural in appearance than the downstream alternative.
- (2) It is more biologically friendly to the fish than the downstream alternative.
- (3) It has easier construction access than the downstream alternative
- (4) It allows fish that use the passage to be released further upstream of the dam, thereby reducing the potential for fish falling back over the dam.
- (5) The No Action Alternative would not assist in making sufficient progress toward establishing self-sustaining populations of the endangered fish.

Initial cost estimates indicate that the Upstream Rock Fish Passage may be up to 20 percent higher than the Downstream Concrete Fish Passage Alternative; however the anticipated biological benefits are greater than the difference in cost.

**AREA DESCRIPTION:** The Grand Valley Diversion Dam is located in the narrow DeBeque Canyon where the Colorado River carved a path through the sandstone and shale formations. The steep, red and tan canyon walls contain the river, Interstate 70, and tracks of the Denver and Rio Grande Western Railroad. The canyon is dotted with sparse vegetation of sage, pinyon pine, and juniper. The meandering river path supports sparse riparian vegetation, including the occasional cottonwood. The few wetland areas are largely limited to locations of human intervention, such as the dam, bridges, and fills associated with railroad and highway embankments. A few tunnels assist the transportation corridor maintain reasonable curvatures for both the highway and railroad. The diversion dam feeds another feature through the lower portion of DeBeque Canyon, the Government Highline Canal. The lower portion of the canyon widens to accommodate a state park, a highway intersection, fuel station, a powerplant, and a coal mine.

**ADDITIONAL INFORMATION:** The applicant has requested water quality certification from the Colorado Department of Public Health and Environment, Water Quality Control Division in accordance with Section 401 of the Clean Water Act. Written comments on water quality certification should be submitted to Mr. Phil Hegeman, Planning and Standards Section, Colorado Department of Public Health and Environment, Water Quality Control Division, 4300 Cherry Creek Drive South, Denver, Colorado, 80222-1530, on or before **May 9, 2002**.

The Colorado Department of Public Health and Environment, Water Quality Control Division also reviews each project with respect to the anti-degradation provision in state regulations. For further information regarding anti-degradation provision, please contact Mr. Hegeman at the Colorado Department of Public Health and Environment, Water Quality Control Division, telephone (303) 692-3518.

A known cultural resources site, Grand Valley Project Diversion Dam is located in the permit A known cultural area will be impacted by the proposed work. The Government Highline Canal is eligible for listing on the National Historic Register of Historic Places, but will not be impacted at this time. To mitigate effects of the fish passage, Reclamation agreed in consultation with the State Historic Preservation Office (SHPO) staff, that a HABS/HAER Level II documentation (detailed drawings and photos of the one roller bay impacted by the fish passage would be the minimum accepted mitigation for this adverse effect. When consultation with the SHPO is finalized, results will be incorporated in the final environmental assessment as environmental commitments.

The following endangered species are present in the permit area: Razorback sucker (*Xyrauchen texanus*), Colorado Pikeminnow (*Ptychocheilus lucius*), Humpback Chub (*Gila cypha*), Bonytail Chub (*Gila elegans*), and the Southwestern Willow Flycatcher (*Empidonax traillii extimus*). In addition, the threatened Uinta Basin Hookless Cactus and the Bald Eagle are present. The threatened species as well as the Flycatcher and Humpback Chub are anticipated to be not affected by the project. The Razorback Sucker, Colorado Pikeminnow, and Bonytail Chub may be affected, but not likely to be adversely affected by the project, as detailed in the U.S. Fish and Wildlife Service Biological Assessment, dated August 2000.

The District Engineer concurs with this determination based on information provided by the applicant and on the Corps' preliminary investigation.

Interested parties are invited to submit written comments on or before **May 9, 2002**. Any person may request, in writing, within the comment period specified in this notice that a public hearing be held to consider this application. Requests for public hearings shall state, with particularity, the reasons for holding a public hearing.

The decision whether to issue a permit will be based on an evaluation of the probable impact including cumulative impacts of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit which reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered including the cumulative effects thereof; among those are conservation, economics, aesthetics, general environmental concerns, wetlands, cultural values, fish and wildlife values, flood hazards, flood plain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, consideration of property ownership, and in general, the needs and welfare of the people.

For activities involving 404 discharges, a permit will be denied if the discharge does not comply with the Environmental Protection Agency's Section 404(b) (1) guidelines. Subject to the preceding sentence and any other applicable guidelines or criteria, a permit will be granted unless the District Engineer determines it would be contrary to the public interest.

The Corps of Engineers is soliciting comments from the public; Federal, state, and local agencies and officials; Indian Tribes; and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the Corps of

Engineers to determine whether to issue, modify, condition or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

Written comments on this permit application should be submitted to the District Engineer at the address listed above. Please furnish a copy of your written comments to the attention of Nick Mezei, Western Colorado Regulatory Office, U.S. Army Engineer District, Sacramento, 402 Rood Avenue, Room 142, Grand Junction, Colorado 81501-2563. For further information, please contact Nick Mezei, at telephone number (970) 243-1199, extension 13, or email [Nick.Mezei@usace.army.mil](mailto:Nick.Mezei@usace.army.mil).

Michael J. Conrad, Jr.  
Colonel, Corps of Engineers  
District Engineer

Enclosures: Drawing(s)

Figure 1: Location Map

Figure 2: Plan View

Figure 3: Plan Detail

Figure 4: Wetland Mitigation Area