



U.S. Army Corps  
of Engineers  
Sacramento District  
1325 J Street  
Sacramento, CA 95814-2922

# Public Notice

Number: 200575106

Date: July 15, 2005

Comments Due: August 15, 2005

**SUBJECT:** The U.S. Army Corps of Engineers, Sacramento District, (Corps) is evaluating a permit application to construct in-stream structures within the San Juan River to improve recreational and functional habitat characteristics, which would result in impacts to approximately 4000 linear feet of waters of the United States. This notice is to inform interested parties of the proposed activity and to solicit comments. This notice may also be viewed at the Corps web site at <http://www.spk.usace.army.mil/regulatory.html>.

**AUTHORITY:** This application is being evaluated under Section 404 of the Clean Water Act for the discharge of dredged or fill material in waters of the United States.

**APPLICANT:** Town of Pagosa Springs  
Mark Garcia, Town Manager  
551 Hot Springs Blvd.  
Pagosa Springs, Colorado 81301

**LOCATION:** The project site is located in the Town of Pagosa Springs in Section 13, 18, Township 35n, Range 2, 1w, Archuleta County, Colorado, and can be seen on the Pagosa Springs USGS Topographic Quadrangle.

**PROJECT DESCRIPTION:** The Town of Pagosa Springs has applied for a Department of the Army permit to reconstruct several fish habitat structures, stabilize and revegetate stream banks, and enhance aquatic habitat characteristics.

The purpose of the proposed project is to improve the recreational and functional habitat characteristics of a portion of the San Juan River.

The improvements include:

- 1) reconstruction of eight (8) existing fish habitat structures in order to create whitewater boulder drop structures, to create self-scouring plunge pools, to dissipate stream energy, improve safety and navigability and enhance whitewater paddling opportunities on the San Juan River. Plunge pools excavated below the drop structure will improve the pool to riffle ratio, create a recovery area for recreational boaters, create deep over-winter water for trout, and be scoured of sediment during high flows.
- 2) Addition of large riffle boulders above, below, and within pools.
- 3) Boulder edge and riparian terraces to provide for erosion protection and planting areas.
- 4) Construction of four single rock deflector/thalweg pool combinations.

The following is a detail description of each type of improvement structure:

## Whitewater Drop Structure

Eight Whitewater Drop Structures will be constructed, which will replace existing rock weirs. The structures will be comprised of four to six foot diameter boulders. Drop structure will extend across the entire channel and be anchored to each stream-bank. Boulders will be anchored to the bed and banks to insure that they will withstand

flood flows. All boulders, within the flow opening, will be placed such that their top surfaces match flush to the existing channel invert, in order to prevent impoundment of flows within the San Juan River. Each structure will be placed at such an elevation as to ensure that there is not an overall reduction of flood capacity for the channel. Concrete grout will be used in order to insure structural stability. Extreme care will be taken to insure that no "live" grout will be introduced into flowing water. Only foundation and high velocity areas will be grouted and care will be taken to maintain interstitial spaces in feeding and resting areas within the pool and tail-out areas.

A four-foot deep pool will be excavated below each structure, with pool depth gradually decreasing in the downstream direction to form the pool tail-out. The resulting pool will provide pool habitat and will be scoured of sediment during high flows. The drop associated with the structure will dissipate stream energy and aerate the water.

The drop structure will be constructed at periods of low flow and a temporary coffer dam will be constructed with on-site cobbles to create a dry work area and ensure proper vertical anchoring.

#### Single Current Deflectors

Four single current deflectors are planned in order to create velocity shelter along the banks and protect select areas from erosion. These structures will be constructed using four to six foot native boulders and will be anchored into the bank and bed of the river in order to insure that they withstand flood flows. These structures do not require concrete grout.

#### Riffle Roughness Boulders

Sixty, six foot diameter riffle roughness boulders will be placed at various locations above and below plunge pools to enhance the quality of the riffle and create velocity shelters for recreational boater and fish.

#### Streambank Stabilization

Portions of the streambanks will be stabilized in three locations: 1) right bank downstream of the recently created "U" structure, 2) along the right bank within the limits of Centennial Park, and 3) along the right bank within an eroding area downstream of McCabe Creek. Selective areas of the bank terracing within high velocity areas may be grouted. This grouting will be done in the "dry" and will not reduce new planting/riparian vegetation areas. The amount of grout is included within the quantities. Bank terracing, consisting of three-foot diameter boulders, will be placed at the toe of the new streambank below the ordinary high waterline within the project area. A total of 270 cubic yards of material will be placed as bank terracing below the ordinary high water line.

A portion of the project, not included in the above description, has been completed in March 2005 within the upper reach. As part of this permit application, the applicant is requesting an after-the-fact authorization. The completed work consists of the replacement of an existing "W" drop structures with a grouted "U" drop, revisions to existing deflectors, and bank stabilization/restoration.

The types and quantities of material to be discharged into the San Juan River to complete the proposed project can be found in Figure 1 of this notice.

### **ADDITIONAL INFORMATION:**

#### **Environmental Setting.**

According to the applicant's notification, existing conditions in this section of the San Juan River can be characterized as moderately disturbed. The banks are rip-rapped in areas and the stream is generally channelized. There are a number of failed or partially failed fish habitat structures in the channel that have accumulated sediment and create varying degrees of safety and navigability issues for the river users. (It is important to notes that the San

Juan River is not considered a navigable waterway.) The upper reach, from Centennial Park to Hot Springs Blvd., is located within the urban area with adjacent urban parks, commercial structures, and resorts. The lower reach, from Centennial Park to Apache Street, which is less urban, is bounded by wetland on one side and a road embankment on the other side. Urban development is occurring within the lower end of this reach.

### **Alternatives.**

The applicant has provided information concerning project alternatives. These alternatives include, no-action, restoration of the original, W-structures, removal of all structures, and/or use of other types of whitewater/habitat structures. The proposed improvements were chosen based on a combination of the goals and requirement expressed by the Town of Pagosa Springs and feedback from the phase I public meeting. According to the applicant, the proposed improvements will provide a deep center channel that will act to pass sediment, woody debris and ice down the main channel. The drops in this main channel will create scour pools that have been shown to increase over-winter habitat. The elevated wings and added boulders will provide velocity barriers and large eddy habitat. Furthermore, the addition of rock structures, un-grouted scoured rock toe armoring, and un-grouted rock bank work will greatly enhance the interstitial habitat within the reach.

These structures were chosen over more traditional structures, such as W-structures, because they are permanent, require no maintenance with the exception of minimal maintenance and adjustment after the first flow year, and because they represent a habitat and safety improvement over other forms of in-stream structures. An inspection of the already constructed U-structure, performed by the applicant's agent, highlights its stability even after the near record continuous high flows seen during Spring of 2005. According to follow-up letter prepared by the applicant's consultant, these structures will provide the recreational amenity that the Town of Pagosa Springs desires through this reach - for both fishing and boating.

Additional information concerning project alternatives may be available from the applicant or their agent. Other alternatives may develop during the review process for this permit application. All reasonable project alternatives, in particular those which may be less damaging to the aquatic environment, will be considered.

### **Mitigation**

The Corps requires that applicants consider and use all reasonable and practical measures to avoid and minimize impacts to aquatic resources. If the applicant is unable to avoid or minimize all impacts, the Corps may require compensatory mitigation.

**OTHER GOVERNMENTAL AUTHORIZATIONS:** Water quality certification or a waiver, as required under Section 401 of the Clean Water Act from the State of Colorado Department of Public Health is required for this project. The applicant has not indicated they have applied for certification.

**HISTORIC PROPERTIES:** Based on the available information, cultural resources are not within the project's area of potential effect.

**ENDANGERED SPECIES:** The project will not affect any Federally-listed threatened or endangered species or their critical habitat that are protected by the Endangered Species Act.

The above determinations are based on information provided by the applicant and our preliminary review.

**EVALUATION FACTORS:** The decision whether to issue a permit will be based on an evaluation of the probable impacts, including cumulative impacts, of the described 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 described activity, must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the described activity will be considered, including the cumulative effects thereof; among those are conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, floodplain 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. The activity's impact on the public interest will include application of the Section 404(b)(1) guidelines promulgated by the Administrator, Environmental Protection Agency (40 CFR Part 230).

The Corps 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 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 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.

**SUBMITTING COMMENTS:** Written comments, referencing Public Notice 200575106, must be submitted to the office listed below on or before August 15, 2005:

Kara Hellige, Project Manager  
US Army Corps of Engineers, Sacramento District  
Durango Regulatory Office  
278 Sawyer Drive, Suite #1  
Durango, Colorado 81303  
Email: [kara.a.hellige@usace.army.mil](mailto:kara.a.hellige@usace.army.mil)

The Corps is particularly interested in receiving comments related to the proposal's probable impacts on the affected aquatic environment and the secondary and cumulative effects. Anyone may request, in writing, that a public hearing be held to consider this application. Requests shall specifically state, with particularity, the reason(s) for holding a public hearing. If the Corps determines that the information received in response to this notice is inadequate for thorough evaluation, a public hearing may be warranted. If a public hearing is warranted, interested parties will be notified of the time, date, and location. Please note that all comment letters received are subject to release to the public through the Freedom of Information Act. If you have questions or need additional information please contact the applicant or the Corps' project manager Kara Hellige, 970-375-9452.

Attachments: 8 drawings