

**Draft Decision Notice and Finding of No Significant Impact**

**Trabuco District Dam Removal Project  
Environmental Assessment (EA)**

**USDA Forest Service  
Trabuco Ranger District, Cleveland National Forest  
Orange County, California**

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**1. Background**

Improving fish passage opportunities through removal of dams and other types of barriers is a national initiative that is a priority for numerous federal and state agencies, including but not limited to the US Forest Service, US Fish and Wildlife Service, Federal Highway Administration, National Marine Fisheries Service, and the California Department of Fish and Wildlife. Removal of barriers is a key component in restoring stream health and function.

The purpose of the Trabuco District Dam Removal Project is to enhance aquatic organism passage and stream habitat in Silverado, Holy Jim, and Upper San Juan Creeks. Removing manmade dams in these creeks is essential to supporting native aquatic species and providing suitable habitat for potential re-establishment of extirpated species including southern California steelhead trout. This project will also eliminate public safety hazards created by these dams and restore natural stream processes. Each dam has been examined to determine if removal or partial removal is necessary to facilitate aquatic organism passage and/or improve stream habitat conditions. Eighty-one dams are targeted for removal. The locations of the dams to be removed are depicted in Figures 1 through 4 of the Environmental Assessment.

In combination, the creeks discussed above contain remnants of approximately 100 dams, originally constructed to create pools for a stocked rainbow trout fishery, conserve water and wildlife, and provide water for fire suppression (Orange County Fish and Game Commission 1982). All of the dams were constructed by Orange County between the 1940s and mid-1970s using native rock combined with mortar. The dams were not built to provide for flood control and were never operated to provide for flood control. Most of the dams had a wooden gate that was placed in the center of the dam each spring to retain water through the summer. Gates were then removed in the fall to allow water to flow through the dam during winter storms. The wooden gates have not been installed for at least 20 years. Despite the presence of the gate openings, approximately 29 of the dams have completely failed and washed out during rainstorms. The dams that did not have gates - approximately 5 dams in Holy Jim Creek - have mostly been filled with sediment so they do not store water. See photos in Appendix A of the EA for examples of dam structures. Several dams were removed by Orange County in the 1980s with the assistance of the US Marines who used explosives to remove several dams that were creating safety hazards. Many of the remaining 81 dams are undermined, partially washed out,

or have been damaged by storm events. Remnants and rubble associated with the failed dams is still visible. Since the gates are no longer used, the dams do not store water. Some dams have stored sediment.

Many of the remaining dams present a barrier to native fish and other aquatic organisms, especially during periods of low flow. Some dams alter physical stream processes such as bed load and sediment transport, natural surface flows, and channel adjustment. This has negative effects on aquatic species, aquatic habitat, and downstream habitat. The ability to move up and down stream is essential for aquatic species in order to complete their life cycles and maintain viable populations. Facilitating aquatic organism passage and improving stream habitat will ultimately increase accessible stream habitat for existing and potential populations of native aquatic species.

In addition, several dams are easily accessible and constitute safety hazards to Forest visitors. Serious injuries occurred in previous years when the gates were still being placed in the dams, as visitors were diving and swimming in the pools that were created upstream of each dam. Although the gates are no longer in use, people do still climb on the dams. There is extensive graffiti on many dams. Some dams have created plunge pools on the downstream side that are used for swimming and diving. This project will address safety concerns and reduce the risk of human injury associated with recreational use on or around these dams.

## **2. Decision and Rationale**

Based on an evaluation of the alternatives in the Trabuco District Dam Removal EA, supporting documentation found in the project record, and review of public comments, I have selected Alternative 1, the proposed action, for implementation.

This selected alternative is to demolish up to 81 manmade dams in Silverado, Holy Jim, and Upper San Juan Creeks. Dams will be demolished to the point where they no longer restrict fish passage and/or impede physical stream processes. Demolition will also ensure the elimination of public safety hazards associated with the existing dams and the proper disposal of the remaining material. Material from the demolished dams will be broken down to appropriate size classes and distributed along the stream when possible. In some cases the materials will be used to reinforce or armor stream banks to protect infrastructure, or removed and recycled for use in other areas. In certain circumstances, dams may be partially demolished to protect adjacent infrastructure such as roads and retaining walls; in those cases, desired fish passage conditions will be achieved without jeopardizing adjacent infrastructure.

Demolition will likely be completed over the next three to five years during the fall months when stream water level is low and when threatened, endangered, and sensitive species (TES) are least likely to be in the project area.

The following methods will be used:

1. Dams accessible from adjacent roads including several dams in Silverado and Holy Jim Creeks may be demolished using an excavator to break up and re-distribute dam materials. If more advantageous, method 2 described below will be used to remove these dams. Hand crews may be used to assist with the break down and redistribution of dam material. If needed, dump trucks will be used to haul dam material away from the site.
2. Dams not accessible from roads, including all dams in San Juan Creek and upper Holy Jim Creek, will be demolished using pneumatic or gas-powered drills, jackhammers, non-toxic expanding mortars (safe for use in aquatic environments) and/or explosives. Materials will be re-distributed along the stream or in some cases used as bank protection. This latter work will be performed by hand crews.
3. At Holy Jim Creek, the lowermost 1,000 feet of the Holy Jim trail may be temporarily opened to vehicles to allow mechanical equipment to access and remove the lowermost dams and the stored sediment associated with these dams. This temporary road would be gated to prevent unauthorized use. In addition, for Holy Jim Creek, dam removal would occur over at least three years (in at least three phases) and possibly over a longer time period to allow stored sediment to disperse more gradually into the stream.
4. At Holy Jim Creek, the following methods will be used for removal of dams within 500 feet of roads or structures: an excavator, pneumatic or gas-powered drills, jackhammers, and/or non-toxic expanding mortars.
5. Forest engineers will provide technical advice on dams that may affect infrastructure. Approximately seven dams in Holy Jim Creek and four dams in San Juan Creek will have detailed engineering analyses so that they can be safely removed without damaging adjacent roads and structures.

The total area occupied by the existing dams is approximately 4 acres, or approximately 0.05 acre per crossing.

Specific measures that will be implemented as part of the project are listed below.

#### General resource protection measures

Resource protection measures and design criteria developed to protect and enhance aquatic habitat conditions and avoid or reduce adverse effects to federally listed species and Forest Service sensitive fish and wildlife species are included in the fisheries and wildlife biological assessment and biological evaluation. A summary of measures that relate to reducing soil disturbance, impacts to vegetation, and the spread of noxious weeds are included below:

1. All construction equipment will be washed prior to commencing construction to minimize the spread of non-invasive species in accordance with NS-8 Vehicle and Equipment Cleaning, Caltrans Storm Water Quality Handbooks, and Construction Site Best Management Practices Manual.
2. Ground-disturbing activity, such as heavy equipment use, would not occur during wet weather conditions.
3. Permanent and temporary spoils would be stored in a manner to prevent sediment delivery to any watercourse during and after project construction.
4. A water pollution control plan, in the event of inclement weather, shall be developed to address water quality downstream of the dam removal sites. This plan shall include actions to provide protective covering for excavated areas or soil stockpile areas.
5. Project activities will only occur during late summer and fall months when potential presence of Arroyo Toads is low. Most Arroyo Toad tadpoles will metamorph by early July and the young toads will remain on sand and gravel bars near the stream for approximately 3-5 weeks. Project activities will not occur until late August or September at the earliest to reduce potential impacts on arroyo toads.
6. In areas where dams are adjacent to populations of Arroyo Chub, only mechanical breakdown of the dams or expanding mortar will be utilized for demolition. If necessary, Arroyo Chubs at risk of negative impacts from dam demolition actions will be captured and placed in temporary refugia until conditions warrant release to the capture site or relocation to nearby suitable habitat. Methods for capture and release will be determined by the Forest Fish Biologist in conjunction with California Department of Fish and Wildlife.
7. In areas where dams are occupied by or adjacent to Sticky Dudleya or Ocellated Humboldt Lily populations, these plant species will be salvaged and transplanted to nearby locations.
8. The Forest Fish Biologist will confirm the presence/absence of aquatic TES species within the project area prior to project implementation and make appropriate adjustments to the demolition methodology, timing, order of implementation, placement of demolished material and number of on-site personnel to protect all TES species and habitat in the project area.
9. Blasting crews utilized for implementation will be experienced and trained for use of explosives in and adjacent to aquatic habitat. Blasting and hand crews will be trained to identify all aquatic TES species and will consult with the Forest Fish Biologist if TES species are present in the project area.

10. At sites where adjacent or downstream infrastructure is a concern, a Forest Engineer will provide a site specific decommissioning plan which may include use of the demolished material to stabilize stream banks, a staged decommissioning process and/or minimum action to be taken which allows aquatic organism passage but does not jeopardize infrastructure integrity.
11. Stream simulation will be used to ensure that the stream channel shape and gradient at each crossing is similar to the natural channel structure occurring along typical unmodified segments of the stream.
12. Scenic objectives for all areas will be met.
13. Best management practices will be followed during removal of dams to protect water quality. These are listed in Appendix C of the EA.
14. Stream banks will be stabilized where necessary to minimize erosion and slopes will be tiered to minimize rock fall and slides
15. The project is expected to occur over the course of three to five years. After five years, environmental documents will be reviewed to determine if new species have been listed, or any other actions have occurred which cause a change in the decision. If no change would occur, the review will be noted and the project will continue.

#### Spill prevention

1. A spill prevention plan that details precautionary, preventative, and spill response measures sufficient to prevent resource damage from any fuels, lubricants or hydraulic fluids used or stored on site would be developed. The plan shall include provisions for: (1) safely refueling equipment outside the 100-year floodplain; (2) storing any fuels, lubricants, or hydraulic fluids offsite or outside the 100-year floodplain and contained to prevent accidental spillage if containers are compromised; (3) emergency response measures adequate to rapidly contain and clean up any spills in a timely manner to prevent dispersal and contamination of soils or water resources, including onsite availability of a spill kit containing absorbent pads, booms, and a leak-proof container for storing contaminated spill cleanup materials; and (4) a reporting requirement that the Forest Service and any necessary emergency responders be notified immediately of any spills, with the stipulation that the spill and all response measures be thoroughly documented and delivered as soon as possible to the Cleveland NF hazardous materials coordinator. The Forest Service and other regulatory agencies may order cessation of operations, and cleanup and abatement if hazardous spills occur.
2. Self-contained sewage and grey water facilities shall be present and the project operator shall ensure and demonstrate that the sewage containment system is in good operating condition.

### Spoils and fill

If excavated material is to be reused during construction, it shall be stored at the existing flat staging areas to prevent sediment transport towards the stream.

### Site-specific actions

The following specific actions, based on the conservation measures and terms and conditions from consultation with the U.S. Fish and Wildlife Service (2014), would be implemented to protect arroyo toads during project implementation. These actions would apply specifically to the **San Juan Creek** location.

1. All field personnel shall be educated about the sensitive biological resources associated with the sites.
2. The qualified biologist shall inspect the demolition area for arroyo toads. Prior to any activity, the qualified biologist shall conduct a briefing session for personnel involved in the project. If arroyo toads are found, the field personnel or project leader shall contact the qualified biologist. The qualified biologist shall relocate the arroyo toads out of the project area into nearby suitable habitat. No later than 30 days after completion of the proposed project, the qualified biologist shall provide a written report documenting the number of arroyo toads removed from the project area, date and time of capture, specific location of capture, approximate size and age of individuals, and description of relocation sites.
3. The Forest will monitor and report on incidental take of arroyo toads associated with the proposed action. In the written report under item 2, the Forest will also report on any arroyo toads found dead or injured due to project activities. The CNF also will provide the CFWO a written report within 3 days of observing death or injury of arroyo toads potentially associated with project implementation. This report will include the date, time, and location of the observation. The purpose of this reporting is to ensure that the project does not exceed estimated take levels.

After reviewing the range of alternatives, I find that Alternative 1, the proposed action, is the most effective alternative for improving stream habitat in the project area. In particular, the selected alternative finds a balance by addressing recovery needs for endangered species, improving riparian habitat, meeting the requirements of the Forest Land Management Plan, and addressing the concerns raised by the public.

Eight resource areas were analyzed in the EA:

- Effects of the project on air quality.

- Effects on water quality, watershed condition and soil conditions including potential flood and erosion risks.
- Effects on adjacent infrastructure including roads and buildings.
- Effects on fish passage, suggestion that fish ladders should be installed.
- Effects on wildlife and plant species, especially for federally-listed threatened or endangered species and species considered sensitive by the Regional Forester.
- Effects on historic and cultural resources.
- Effects on scenery; concern that dams are a scenic resource.
- Effects on fire suppression resources.

Overall, the selected alternative best addresses effects on these resource areas. There are no identified significant adverse impacts to any resource area under the selected alternative. In fact, as compared to baseline conditions this project will improve watershed conditions, improve fish passage, and improve wildlife habitat. This project will have a long-term positive effect on natural resources and public safety.

### **3. Other Alternatives Considered**

In addition to the selected alternative, a No Action alternative was considered and analyzed in detail as part of this project. Under the No Action alternative, no dams would be removed, and they would fail naturally over time.

Two other alternatives were considered but not brought forward for further analysis because they did not meet the purpose and need for the project and were extremely expensive. One alternative was to construct fish ladders at each dam, and the other was to repair and maintain the dams.

### **4. Public Involvement**

The Trabuco Ranger District identified potentially interested stakeholders and invited them to comment on the proposed action. These stakeholders included recreational user groups, Tribal governments, local government and regulatory organizations, local environmental organizations, and other members of the public that have expressed interest in projects on the Trabuco Ranger District of the Cleveland National Forest.

Scoping and public involvement for the project consisted of the following:

1. The proposal was first listed in the Schedule of Proposed Actions (SOPA) in January 2013 and has been in each quarterly SOPA since then.
2. Scoping letters were sent to all individuals who have expressed an interest in Trabuco Ranger District projects on March 22, 2013 and legal notices were placed in the *Riverside Press-Enterprise* and the *Orange County Register* to begin a 30-day scoping period. Additional scoping occurred internally among USDA-Forest Service specialists and specialists from other state and federal agencies. The *Orange County Register* also printed an article about the project on April 14, 2013; this generated some further comments from the public. Approximately 50 responses were received based on the initial scoping letter.
3. The draft Environmental Assessment was released for public comment on September 24, 2013, and the comment period closed on October 24, 2013. Legal notices were placed in the *Riverside Press-Enterprise* and the *Orange County Register* advertising the 30-day comment period. Approximately 15 responses were received during the comment period on the draft Environmental Assessment.

Commenters expressed support for and concerns about the project. Responses to comments are provided in Appendix B of the EA.

## **5. Finding of No Significant Impact**

After considering the environmental impacts described in the EA and after examining supporting documentation found in the project record, I find that implementing the selected alternative will not have a significant impact on the quality of the human environment, considering the context and intensity of impacts (see 40 CFR 1508.27). Therefore an environmental impact statement will not be prepared. I base my finding on the following:

1. The finding of no significant impact is not biased by the beneficial impacts of the selected alternative. The beneficial effects consist of the improvements in stream condition, improved fish passage, and improved public safety in the project area.
2. No significant impacts on public safety will occur due to the implementation of the project (see section 3.3.1 of the EA). The project will instead improve public safety as compared to historic conditions.
3. No significant impacts on the unique characteristics of the area will occur because this project improves natural resource conditions, including soil and water quality, and biology. The project also improves social resources such as scenery and recreation experiences. See sections 3.1, 3.2, and 3.3 of EA.
4. The impacts on the quality of the natural environment are not likely to be highly controversial because there is no known scientific controversy over the effects of the



project. Sections 3.1 and 3.2 of the EA describe the consequences of the alternatives to the physical and biological environments.

5. The Forest Service has considerable experience with the types of activities to be implemented. Analysis shows the impacts are not uncertain and do not involve unique or unknown risks.
6. The action is not likely to establish a precedent for future actions with significant impacts because the purpose and need for the project will be addressed by the selected alternative.
7. The cumulative impacts associated with the selected alternative are not significant (see relevant cumulative effects sections in Chapter 3 of the EA). This EA analyzed the cumulative effects of this project in combination with activities on adjacent National Forest System lands.
8. The action will have no significant adverse impact on districts, sites, highways, structures, or objects either listed or eligible to be listed in the National Register of Historic Places, or on Tribes. A heritage resource and tribal relations specialist has surveyed the project area and did not identify heritage resources that would be damaged or Tribes that would be adversely affected by the proposed action (see section 3.3.2 of the EA).
9. The action will not have significant adverse effects on any endangered or threatened species, or habitat that has been determined to be critical under the Endangered Species Act of 1973, as amended. Project area surveys were conducted by a Forest Service wildlife biologist and are documented in a project-specific biological evaluation and biological assessment (see section 3.2 of the EA). The Forest has received a Biological Opinion which includes a small amount of authorized take for Arroyo Toads for this project; the net long-term effect of the project will be beneficial for this species.
10. The action will not violate federal, state, and local laws or requirements for the protection of the environment. Applicable laws were considered in the EA. The action is consistent with the LMP (see section 1.3 of the EA).

## **6. Findings Required by Other Laws and Regulations**

My decision to implement the selected alternative is consistent with the long-term goals and objectives listed in the LMP. The project was designed in conformance with LMP standards and guidelines.

### **6.1 National Forest Management Act of 1976, as amended**

All project activities fully comply with the LMP. This project incorporates all applicable LMP forest-wide standards, guidelines, and management area prescriptions, as they apply to the project area, and complies with LMP goals and objectives. All required interagency reviews and

coordination have been accomplished and new or revised measures resulting from these reviews have been incorporated. The LMP complies with all resource integration and management requirements of 36 CFR 219.14 through 219.27. Application of LMP direction for the project ensures compliance at the project level. With the inclusion of LMP direction, this proposed project will move the existing condition of the project area toward its desired condition.

### **6.2 Endangered Species Act of 1973, as amended**

The project area was surveyed for threatened and endangered species. Some areas are occupied by the endangered Arroyo Toad. A biological assessment was prepared and a Biological Opinion was received for the project. The Biological Opinion includes a small amount of authorized take for Arroyo Toads for this project; the net long-term effect of the project will be beneficial for this species (see section 3.2.1 of the EA).

### **6.3 National Historic Preservation Act of 1966, as amended**

The action will have no significant adverse impact on districts, sites, highways, structures, or objects either listed or eligible to be listed in the National Register of Historic Places, or on Tribes. The project has been analyzed by a heritage resource and tribal relations specialist in consultation with the State Historic Preservation Officer (SHPO) and no historic properties or heritage resources that would be of concern to Tribes would be adversely affected by the proposed action (see section 3.3.2 of the EA).

### **6.4 Federal Water Pollution Control Act (Clean Water Act) of 1972, as amended**

The design of project activities is in accordance with LMP standards and guidelines, best management practices, and applicable Forest Service Manual and Handbook direction. Monitoring and evaluation of the implementation and effectiveness of LMP standards and guidelines and Best Management Practices will occur. Project activities are expected to meet applicable state water quality standards. See section 3.1.1 of the EA.

### **6.5 Executive Order 11988, Clean Water**

This project is fully consistent with this executive order.

### **6.6 Executive Order 13112, Invasive Species**

Implementation of the selected alternative is not anticipated to cause or promote the introduction or spread of invasive species. The selected alternative is designed to reduce the potential introduction and spread of invasive species.

### **6.7 Executive Order 13186, Migratory Birds**

Management objectives of this executive order will be met. Minimal effects on migratory bird species are expected in the short term, and over the long term the project will have beneficial effects on these species. See section 3.2.4 of the EA.

## **7. Administrative Review or Objection Opportunities**

This decision is subject to objection pursuant to 36 CFR 218. A written objection, including attachments, must be postmarked or received within 45 days after the date that notice of this draft decision is published in *The Riverside Press-Enterprise* and the *Orange County Register*. Electronic objections in common formats (.doc, .rtf, .pdf, or .txt) may be submitted to: objections-cleveland@fs.fed.us with Subject: Trabuco District Dam Removal. Appeals may also be faxed to (858) 673-6192 to the attention of “OBJECTION: Trabuco District Dam Removal,” sent by mail to the following address, or hand-delivered during normal business hours of 8 a.m. to 4:30 p.m., Monday through Friday, excluding holidays:

Forest Supervisor  
ATTN: Objections  
Cleveland National Forest  
10845 Rancho Bernardo Rd, Suite 200  
San Diego, CA 92127

Persons or organizations who meet the requirements of 36 CFR 218.5 may appeal this decision. Appeals must meet content requirements of 36 CFR 218.8.

## **8. Implementation Date**

In accordance with 36 CFR 218.12, if no objection is received within the legal objection period, this decision may be signed and implemented on, but not before, the fifth business day following the close of the objection-filing period. If an objection is filed, this decision cannot be signed or implemented until the reviewing officer has responded in writing to all pending objections.

## **9. Contact**

For additional information concerning this decision or the Forest Service objection process, contact:

Kirsten Winter, Forest Biologist  
Cleveland National Forest  
10845 Rancho Bernardo Rd, Suite 200  
San Diego, CA 92127  
Phone: (858) 674-2956

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DARRELL W. VANCE  
District Ranger

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Date

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