

**Environmental Analysis for Entiat Fish Habitat Restoration Project**

**July 27, 2001**

**EA # OR-134-01-EA-004**

**Bureau of Land Management  
Wenatchee Field Office  
Wenatchee, Washington**

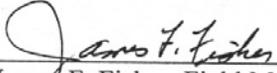
**Finding of No Significant Impact (FONSI) and Decision Record  
for  
Entiat River Fish Habitat Improvement Projects on BLM Public Lands**

**Finding of No Significant Impact (FONSI)**

The Proposed Action (Alternative 1) for fish improvement within the Entiat River is not expected to have any significant impacts on the environment. This conclusion is based on the analysis as described in the attached environmental assessment and other information available to me. Accordingly, no further analysis will be done, and no environmental impact statement is required.

**Decision Record**

The proposal to build fish habitat improvement projects on public lands managed by the BLM within the Entiat River (Alternative 1) is supported by the past 7 years of work done by the Entiat Watershed Planning Group and the Limiting Factors Analysis done by the state. The two proposed projects would be done with the least amount of bank or riparian vegetation disturbance. This decision is based on the need for the action and the general recent trend toward salmon habitat improvements being proposed in the Pacific Northwest. The window of opportunity for working in the river was set during August and September by our JARPA permit issued by and not disturbing salmon or steelhead was determined in by the state

  
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**Environmental Assessment for  
Entiat River Fish Habitat Improvement Projects on BLM Public Lands  
Wenatchee Field Office, Spokane District**

**Introduction**

The Bureau of Land Management (BLM) proposes to install one artificial log jam on public lands at River Mile (RM) 10.3 and a rock and boulder inverted weir at RM 15 on the Entiat River, located about 10 to 15 miles from the town of Entiat (see attached maps). The Entiat is a key watershed tributary to the Columbia River. Three fish species that are federally listed as endangered (Spring chinook, steelhead, and bull trout) use the river for migration, spawning and rearing.

The BLM also proposes to cooperate with the Natural Resource Conservation Service (NRCS), and the Entiat Watershed Planning Unit proposals, by providing both technical advice and funding for one of their proposed fish habitat improvement projects on private land on the Entiat River.

**Need for the Proposed Action**

The Entiat River is judged to be rearing limited in the section downstream from the terminal moraine at Potato Creek. (Pers. Comm. Bob Steele, WDFW). The 10-mile section of the Entiat downstream from the confluence with the Mad River was bulldozed and reshaped by the Army Corps of Engineers in 1948. This section is deficient in pool-to-riffle ratio and in log jams and large woody debris (LWD). This is the type of habitat necessary for juvenile hiding, rearing or refuge.

**Description of Alternatives**

Two alternatives were considered (Proposed Action and No Action); both are described individually below.

Alternative 1 - (Proposed Action)

The Proposed Action is to build two artificial structures on BLM public lands on the Entiat River at River Mile 10.3 and two more at RM 15. The logjams at RM 10.3 would have large trees (cottonwood and pine or fir with the rootwad attached) facing upstream, with the main trunk cabled to existing or placed large boulders 3 to 4 feet in diameter. The purpose is to anchor key logs to the boulders to trap floating wood debris during high water events to build logjams that will provide hiding and rearing habitat for juvenile salmonids.

For the least disturbance of the substrate, a "walking Spider backhoe" will be used to place the root wads and boulders. The rock barb will be built in a manner that avoids disturbing the substrate. The work window, as specified in the JARPA permit, is low water in August and September to avoid any potential conflict with or damage to salmonids.

To ensure that no juvenile salmon or steelhead activity are in the area, snorkeling will be done of the project area prior to beginning the projects.

If cultural resources are encountered during project implementation, ground-disturbing activity will be halted in the area of the find until the resource value is evaluated by a BLM archaeologist

in consultation with the Washington State Office of Archaeology and Historic Preservation and, as appropriate, historical societies or tribal governments.

Because the log dragging will disturb soil, it will be necessary for the archeologist to monitor the actual log skidding when it is performed.

**Alternative 2.** Under the No Action Alternative, the sites would remain in their current condition.

## **Affected Environment and Environmental Impacts**

### **Fisheries**

Chinook salmon, steelhead and bull trout (federally listed under the Endangered Species Act as (Endangered) use the mainstem Entiat River for migration and spawning habitat. No known spawning redds are located in either of the project sites. The artificial log jam and boulder weir proposed may provide that habitat in the future. The Entiat River has been subjected to a Limiting Factors Analysis (Washington Conservation Commission, Carmen Andonegui 2000) and identified rearing habitat and lack of pools as limiting factors in salmonid reproductive success.

Alternative 1, placement of two artificial logjams on the lower BLM parcel and two rock barbs at the upper project site, would be one step in a larger habitat improvement plan for the whole watershed. Any improvement in survival of juvenile salmonids in the Entiat River would benefit at least two listed species of salmon and steelhead, as well as provide possible benefits to bull trout and native rainbow trout. The proposed Entiat River Fish Habitat Project is may affect, not likely to adversely affect, Chinook salmon, steelhead and bull trout.

The one proposed log jam on BLM public lands at RM 10 should provide both refuge from the current, as well as hiding and rearing habitat for juvenile salmonids. The two rock boulder barbs with root wads incorporated at RM 15 should build a pool and resting area on the downstream side of the structure. The effectiveness of the artificial logjam design and the rock weir can be compared to the other demonstration project methods of fish habitat improvement proposed for private lands by NRCS.

Under Alternative 2, portions of the Entiat River fish habitat would continue to be limited by lack of hiding, rearing and refugia habitat, specifically logjams, pools and side channels (Entiat Watershed Assessment 1996).

### **Wildlife**

The project areas have potential generalized habitat for grizzly bears, wolves and eagles (all Federal Threatened species under the ESA), but there have been no sightings of any of these species in or near the project area. Eagles are known to use the corridor of the Entiat River from December to April. No known denning, feeding, roosting or foraging habitat for grizzly bears, wolves, lynx (also Federally listed as Threatened), or bald eagles are expected to be impacted due to the duration and timing of this project. Both project sites are within 100 yards of residential dwellings, a store and recreational activity. The Entiat River Fish Habitat Project will result in no effect to the aforementioned ESA-listed mammal species.

### **Vegetation**

Willows, waterbirch, sedges, and poplars are all present at the site. Botanical clearances were completed by BLM botanists. Small amounts of damage to riparian vegetation are expected where the walking Spider backhoe enters the river. The equipment will enter the river where the vegetation is thinnest.

### **Cultural**

A BLM Archeologist inspected the site on July 5, 2001. No cultural resources were located along the path where the logs will be dragged to the river. However, this area is considered high probability for cultural resources due to the area's close proximity to the river (probability of subsurface prehistoric materials). A Class III cultural resource inventory was conducted for the project area. No historically significant cultural resources were identified in the project area. Cultural resources databases and records were reviewed. Although remains of recent historic structures, foundations and trash have been noted near the project area, no significant cultural resources have been recorded in the area of potential effect. Having an archaeologist onsite when the logs are being dragged would reduce the potential for serious damage to any cultural resources that surface during that activity and provide protection measures for any resources that could be found.

### **Cumulative Impacts:**

The Entiat Watershed Planning Unit and the NRCS Stream team have identified the Entiat River from the terminal moraine downstream to the mouth as being deficient in pools, logs and large woody debris, resting and rearing habitat for juvenile salmon. The cumulative impact of these two project on BLM public lands in conjunction with similar fish habitat enhancement projects on private lands in the lower 5 miles will improve the diversity of habitat and increase resting, rearing and hiding habitat for all three salmon, steelhead, and bull trout in the Entiat River.

### **Other Resource Elements Analyzed**

*Environmental Justice:* No disproportionately high and adverse human health or environmental effects on minority or low-income populations are expected to result from implementation of Alternative 1 (Proposed Action) or the No Action Alternative.

*Other Resource Elements Considered:* Other resource values or elements considered in analyzing the alternatives included:

- Air quality
- Wild and scenic rivers
- Prime/unique farmlands
- Special area designations
- Paleontological resources
- Wilderness
- Hazardous/solid materials
- Invasive plant species
- Water Quality

Air quality would not be affected. The disturbed areas will be reseeded to control knapweed spread. None of the other resource values are present on the project site.

### **Agencies and Individuals Contacted**

Phil Archibald, Fisheries Biologist, USFS Entiat Ranger District, Entiat, Washington  
Rick Edwards, Hydrologist, USFS Entiat Ranger District, Entiat, Washington  
Bob Steel, Fisheries Biologist, WDFW, Wenatchee, Washington  
Bruce Heiner, Hydrologic Engineer, WDFW, Pullman, Washington  
Joe Lange, NRCS, Wenatchee, Washington  
Anthony Whiley, Washington Dept. of Fish and Wildlife, Wenatchee, Washington  
Bruce Crespín, BLM Archaeologist, BLM Wenatchee Resource Area  
Steve Christy, BLM Archaeologist, BLM Wenatchee Resource Area

### **References Cited**

Entiat Watershed Assessment, Entiat Watershed Planning Unit, 1996

Steele Bob, Fisheries Biologist, Washington Department of Fish & Wildlife, personal communication, 2001.

Washington Conservation Commission, Carmen Andonegui 2000