

**Environmental Assessment**

**for**

**Saleratus Creek Aquatic Habitat Restoration Plan  
Environmental Assessment No. OR090-EA-04-06**

**June 2004**

**United States  
Department of the Interior  
Bureau of Land Management  
Eugene District Office  
Siuslaw Resource Area**

**U.S. DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
EUGENE DISTRICT**

**SALERATUS CREEK AQUATIC HABITAT RESTORATION PLAN  
ENVIRONMENTAL ASSESSMENT NO. OR090-EA-04-06**

**I. INTRODUCTION**

**A. Purpose and Need**

Saleratus Creek is a fourth-order tributary of Wolf Creek (a Siuslaw River tributary) with origins located in the Central Coast Range, Western Lane County, Oregon. The head waters begin in T18S, R7W, Section 20. Harvesting of timber resources; agriculture and human settlement with its related habitat alteration; and harvests of fish have led to fish runs that number a fraction of their original size in the Siuslaw River (BLM, 1996). Human activities, including logging and road construction, have degraded stream habitat for coho, steelhead, and cutthroat trout in Saleratus Creek. The purpose of this restoration plan as related to the Aquatic Conservation Strategy objectives (ACS) is to improve the quality and quantity of appropriate habitats in stream reaches of Saleratus Creek. This project is designed to replace in-stream structure, provide habitat for fish species, and improve natural hydrologic processes in reaches of the project area. In addition, the restoration of conifers in riparian areas would be addressed to provide amounts and distributions of coarse woody debris that would enhance long term stream complexity and stability.

**B. Conformance**

The proposed action and alternatives are in conformance with the Record of Decision for Amendments to Forest Service and Bureau of Land Management Planning Documents within the Range of the Northern Spotted Owl, April 1994 (ROD), and the Eugene District Record of Decision and Resource Management Plan, June 1995 (Eugene District ROD/RMP) as amended. This EA is tiered to these Environmental Impact Statements.

The Proposed Action is in conformance with the Aquatic Conservation Strategy in the Northwest Forest Plan. Information summarized in the Saleratus Creek Aquatic Habitat Restoration Plan is from the Siuslaw Watershed Analysis (Feb 1996), the Eugene District Wolf Creek Watershed Analysis (March 1995), the Upper Siuslaw River Habitat Restoration Plan Environmental Assessment (May 1998), the Saleratus Habitat Improvement Project (Poole, 1994) and the Lower Wolf Creek Basin Stream Restoration Plan (Hammer and Beale, 1994).

The Proposed Action and Alternatives (except the no action) are consistent with management triggers and criteria identified in Table 7 of the Late Successional Reserve Assessment, Oregon Coast Province - Southern Portion (R0267, R0268), June 1997.

The proposed action would follow general conditions related to fill removal activities as listed in permit (FP-13963) issued by the Oregon Department of State Lands (June 19, 2001, renewed Sept. 2003).

**II. ISSUES SELECTED FOR ANALYSIS**

**ISSUE 1:** Would the proposed stream enhancement affect the attainment of the Aquatic Conservation Strategy (ACS) objectives?

**ISSUE 2:** How would cabling affect the stability and function of in-stream structures?

### III. PROPOSED ACTION AND ALTERNATIVES

#### A. Proposed Action – Restoration with Cabling

The proposed action includes two general categories of work. One or more activities may be performed at each of the project locations.

##### 1. Channel Structure

Channel structuring involves placement of materials in the channel to raise the channel elevations and to increase the complexity of habitat in the channel. Materials used in this process are primarily logs, boulders, stumps, rock, and gravel. Designs are based on existing structural features occurring naturally in the system and on structures previously developed by the Eugene District, other BLM Districts, or other agencies. Proposed structures are designed to be specific to a location and take into account existing channel and riparian features.

Off site materials may be delivered to designated project sites well in advance of project work and stockpiled at the project site or they may be delivered to the site at the time they would be used, reducing the need for stockpiling and handling.

Creation of structural features utilizes some hand work, but primarily involves use of heavy equipment to deliver and place the materials. Once in place, the larger structural materials are generally anchored to the substrate using cables and epoxy. Smaller logs, rock, and gravel may be allowed to move in response to the current. Because of the lack of retention features, many of the materials, particularly logs and stumps, would move out of the river system if not anchored. Once anchored, they create collection points to retain placed material or materials entering the channel from adjoining slopes. Structural materials for most project work would be delivered to the channel and placed in position in the channel using spiders (walking excavators), excavators, front end loaders, or similar equipment. Temporary access is generally created from existing roads through the riparian area to the channel. Most access routes would be less than 200 feet in length, are generally located in areas where riparian vegetation restoration is planned, and may be sub-soiled after project work is completed to create planting sites. The development and rehabilitation of access routes are designed to reduce the potential for erosion and channel disturbance, and in many locations utilize existing older roads and accesses.

Several types of channel structures are proposed. The structures are placed in combinations in and along the channel. Design depends upon the existing conditions and potential of the site. The following descriptions are for the general types of structures used:

- a. Weirs – Weirs are full-spanning structures of logs, boulders and/or stumps. They extend up the bank to protect against erosion around the end of the weir. The height and length depend on the individual site conditions.
- b. Jetties – Jetties are structures of boulders, logs and/or stumps extending from the bank into the channel but not spanning the channel. They are designed to redirect flow and to create diverse habitats along the margins of the channel.
- c. Ramp logs – Ramp logs are logs with one end up on the bank and the other end extending into the channel. They function similarly to jetties.
- d. Log and boulder placement – Individual or clusters of logs, boulders, and/or stumps are placed in the channel in various positions to break up flows, create small islands, and increase habitat diversity.

The Saleratus Creek project area (sec. 31) has 6 log projects planned. The project sites are shown in Attachments 1 and 2. All projects consist of log jams and ramp logs that would be cabled. Boulders would be used to anchor some logs.

##### 2. Riparian Restoration

The purpose of riparian restoration is to increase the percentage of conifers in the riparian area as a future source of large woody material in the channel as well as snags and woody debris in the riparian area. The riparian zones contain red alder, big leaf maple, and mixed-age conifers. Restoration efforts are planned primarily for the red alder dominated communities.

In developing accesses from existing roads into the stream channels, routes are selected that facilitate riparian restoration. Red alder and a few small Douglas fir trees along the access

routes would be removed, with the downed trees placed in nearby riparian areas or in the stream channel. Additional red alder may be removed in small patches adjoining the access routes to reduce shading in planting sites. Brush may be removed from additional adjoining sites. The sites where trees and brush are removed from the access routes are not usually sub-soiled. Trees are felled using chain saws, other hand equipment, or heavy equipment (e.g., excavator). Brush is generally removed in areas where trees are felled. Conifers and larger big leaf maple are preserved wherever possible. Where younger conifers are present, competing vegetation may be removed to release conifers and hasten structural development.

During the subsequent planting season, usually the winter months following site preparation, trees are planted in the prepared locations. Species for planting include Douglas fir, western red cedar, and western hemlock, depending on the site conditions and proposed species mix. Trees are generally tubed to reduce browsing. Competing vegetation may be controlled by placing mats around the trees or by brushing during subsequent years.

Riparian restoration along the access routes is planned for Saleratus Creek (Sec. 31).

**B. Alternative 2 – Restoration without Cabling**

Alternative 2 would be identical to the proposed action except that the in-stream structures would not be cabled.

**C. Alternative 3 – No Action**

Under a No Action Alternative, no additional actions would be taken to increase stream structure, restore riparian areas, or to stabilize roads. Culvert and road work already occur as part of the district road maintenance program; however, the emphasis would be on road stability and not on assisting with recovery of the aquatic system and its associated fauna. Under the No Action alternative, no stream channel restoration would be done and riparian restoration would be primarily associated with vegetation manipulation carried out for other purposes. Both the stream and riparian habitats would be expected to show only very gradual recovery over a much longer period of time as a result of management actions taken under this alternative.

**D. Alternatives Considered but Not Analyzed**

1. Stream Restoration with horses.

This method was considered as a low impact alternative to heavy equipment. Past experience with this method has shown that horses are not capable of pulling the size of logs proposed for this project.

2. Stream Restoration with helicopter.

This method was considered as a low impact alternative to using heavy equipment as related to ground disturbance and stream restoration. Since it was known that planned log weights would exceed helicopter lifting limits and that helicopters have an inability to effectively place boulders, this alternative was not addressed further.

3. Tree pulling with mechanized equipment.

This method was considered as an alternative to supplying logs from an external source. The project requires more logs than would be available with tree pulling.

**IV. EXISTING CONDITIONS**

**A. General Setting - Fisheries**

Saleratus Creek, a tributary of Wolf Creek, drains approximately 2 square miles of the Wolf Creek basin. The project area is located in T18S, R7W, Section 31. Spawning and rearing habitat is variable, with some areas lacking large in-stream wood and down cut to bedrock. Other reaches have sporadic recruitment of LWD that has created useable spawning and rearing habitat. There are some old growth conifers present adjacent to the stream. A narrow gravel-surfaced road parallels the stream channel for approximately 0.5 miles. Between mile post 0.3 and 0.5, large conifers have fallen across the road and prevented vehicle traffic access (Hammer and Beall, 1994).

All stream reaches in the project area are located on BLM land. Saleratus Creek contains approximately two miles of suitable habitat for anadromous fish. Since 1985, BLM has documented spawning of coho, steelhead, cutthroat trout and lamprey. In addition schools of zero

aged coho salmon were observed in the project area. The construction of road 18-7-31.1 impacted the former stream course resulting in channel straightening and constriction (Poole, 1994).

This creek is dominated by shallow stream habitats with 47% of the substrate as bedrock. Current observations show that, from the confluence of Saleratus Creek up to and including the proposed project area, most spawning areas are located in stream reaches adjacent to private land holdings; however, the majority of pools and spawning beds lack adequate depth. Particularly lacking in the project reaches are deeper pools and off-channel rearing areas (USDI, 1995).

Fish habitat improvements have been conducted in Saleratus Creek, including gabion structures, log jams, log and boulder weirs. In 1994, a stream restoration consisting of log jams and log weirs was implemented. Cabling was used on the upper in-stream projects. However, most structures were left uncabled to assess stability of log placements. Each of the log placement sites has been monitored annually for the last eight years.

## **V. SPECIFIC RESOURCE DESCRIPTIONS**

### **A. Wildlife**

#### **1. Threatened and Endangered Species**

The stand near and adjacent to the proposed project area is composed of typical Douglas fir/western hemlock habitat of varying seral stages. Within Saleratus Creek, there is habitat suitable for the bald eagle, spotted owl and marbled murrelet as well as one known spotted owl nest site (Saleratus/MSNO#0134).

The proposed action area is designated Critical Habitat for the both the marbled murrelet and spotted owl.

#### **2. Special Status Species**

No other special status species or unique habitats were encountered within the project area during various wildlife surveys associated with this proposed action.

#### **3. Other Wildlife**

This area currently provides foraging habitat for deer and elk, and also serves as hiding and escape cover for these species. There is evidence these species utilize these areas.

Adjacent mature and old-growth stands currently possess adequate large snags and down logs. In the younger adjacent stands; however, there is a general lack of snags over 20 inches dbh. Those that do occur here generally are less than 15 inches and are in early stages of decay.

Consequently, species that rely on such structure for foraging, nesting, or denning would be well accommodated within the older adjacent stands. Such species would include bats, woodpeckers, and nuthatches.

### **B. Botanical Resources**

The four acre project area was surveyed in the summer of 2003 for Special Status vascular plants, lichens, and bryophytes. None of these species were found.

Noxious weeds listed by Oregon State were found along the roadside, including Himalayan blackberry, tansy ragwort, common St. Johnswort, Canada thistle, and bull thistle. Some blackberry also occurs on the stream banks.

### **C. Recreation**

There are no designated recreation facilities or sites within or near the project area. Recreation activities in or near the project site is of a dispersed nature such as hunting and driving for pleasure. The project site is along Weyerhaeuser's C-Line road and just north of Wolf Creek road, which are main access routes.

### **D. Geology and Soils**

The Saleratus Creek area is geologically mapped within the Tye Formation that consists of arkosic marine sandstones that may include minor interbeds of tuff (Walker and Macleod, 1991). The Tye Formation overlies the Flournoy Formation and both share similar lithology. The Tye Formation is composed of delta and turbidite sands from the Klamath Mountains while the Flournoy formations were derived from local undersea volcanoes as well as sediment from the Klamath Mountains (Orr and Orr, 1996). Mountain side slopes in the area are typically steep with relatively uniform gradients from ridge top to the valley bottom. Ridge tops are sharp and narrow. Dry raveling is associated with these slopes and is primarily active on the convex portions of the

hillslopes. Debris avalanche occurs in areas where gradients exceed 70 percent typically off the fault scarps of the thick-bedded sandstone of the Tye and Flourney Formations. Debris torrents may originate from first order headwater streams in the upper reaches where headwalls or hollows of drainages with slope gradients between 90-100 percent may be present.

The general area lies in the Bohannon-Digger-Preacher Soil Association. These soils formed from sandstone in the udic-mesic zone of the Coast Range (USDA, 1987). Soils in the riparian area are mapped as a Meda loam. The Meda loam is a well-drained soil that forms in bottomlands in alluvium and colluvium. Permeability is moderate. Typically, the surface layer is very dark grayish brown loam about 8 inches thick. Subsoils reach to 60 inches or more (USDA, 1987).

## VI. ENVIRONMENTAL CONSEQUENCES

### A. Unaffected Resources

The following resources are either not present or would not be adversely affected by the proposed action or any of the alternatives: Areas of Critical Environmental Concern, regional or local air quality, prime or unique farmlands, cultural resources, floodplains, environmental justice, Native American religious concerns, hazardous or solid waste, wild and scenic rivers or wilderness. Water quality, riparian zones, and the habitat of the coho salmon are expected to benefit from the proposed actions.

### B. Expected Consequences with All Action Alternatives

All action alternatives would require some short-term disturbance to the road right-of-way, riparian zone, and stream channel. All actions are in areas that have previously been disturbed by management activities. No new roads would be created as a result of the proposed actions, although temporary accesses would be needed for movement of equipment and materials from existing permanent roads to restoration sites in the stream channel.

Consequences include a transient increase in sediment from channel structuring; a reduction in overstory and understory vegetation in riparian areas during riparian site preparation and planting, and potential disturbance of fishes, invertebrates, and aquatic communities in the stream channel during channel structuring.

The consequences to vegetative characteristics associated with individual fisheries structures are expected to be relatively low except in access routes used to move materials from roadways to the stream channel. Roading and tree yarding would result in soil disturbance and compaction as well as increase the likelihood of non-native and potentially noxious species entering and/or increasing in the project area. Surface soil disturbance may also result in disruption of soil dwelling fungal hyphae that play an important role in nutrient cycling and decomposition. Suggested botanical mitigation measures under the *Mitigating Measures* section following should help alleviate the potential for the increase or spread of non-native species, and high levels of mycorrhizal disturbance.

As a result of the placement of structures in the stream, water surface levels would be raised at all flow levels. During peak flows more water would flow into riparian areas. Project designs limit the potential for erosion. The flooding of riparian areas provides a positive benefit for deposition of silts in riparian areas and increased groundwater infiltration. Previous stream projects that have raised water levels have resulted in an increase in wetlands in the adjoining riparian area. The projects are expected to contribute to an overall improvement in water quality and reduced flooding downstream.

No habitat suitable for any federally listed or proposed terrestrial wildlife species would be modified by the action alternatives, but activities associated with these proposed endeavors would create noise above ambient levels typical of the areas. The resulting audio disturbance may disturb nesting owls and murrelets if present in the adjacent suitable habitat. The only known nest site for such species is the Saleratus owl center. This site would be surveyed prior to activities and, if nesting is determined, appropriate mitigation measures would be pursued.

The action alternatives may result in a temporary disturbance of the riparian areas and may cause some species to abandon the area. It is expected these species would repopulate the area upon project completion. Because of increased complexity to the riparian area, the overall result of these proposed projects would be an improved habitat for terrestrial and aquatic species.

Recreation activities may be disrupted while the project is being accomplished. The project area is within Visual Resource Management (VRM) class IV, which has the objective of allowing major

modifications of the existing character of the landscape. The action alternatives would be compatible with this objective.

### **C. Proposed Action - Restoration with Cabling**

#### **ISSUE 1: Effects on Attainment of ACS Objectives**

To attain Aquatic Conservation Strategy (ACS) objectives within the proposed Riparian Reserves, specific management actions that are consistent with the Wolf Creek Watershed Analysis have been included in the Proposed Action. The following is a site specific analysis of the effects of the Proposed Action on the attainment of the ACS objectives:

Objective 1: The Proposed Action would maintain and contribute to the restoration of the distribution, diversity, and complexity of watershed and landscape features. The placement of structural materials in the channel would help to create lost habitat necessary for all life cycles of salmonid and other indigenous aquatic species. Large woody debris (LWD) or key piece placements would help maintain future formations of back-water areas, deep rearing habitat (pools), off-channel and high flow refuges, and key spawning habitats. In addition, key piece placements would provide locations for the collection of additional woody debris (jam formation) that lead to increased channel complexity. The proposed riparian action to increase the percentage of conifers in the riparian area would ensure future adequate levels of large woody material in the channel, and snags and woody debris in the riparian area.

Objective 2: The Proposed Action would help restore the spatial and temporal connectivity within and between watersheds. In channel log and boulder placements would help to restore the connectivity of the stream channel with the riparian zone in areas that are currently channel confined and downcut. Restored areas of connectivity may once again function as water storage areas during critical low flow summer months, help reduce water temperatures, and function as a water filter.

Objective 3: The Proposed Action would maintain and contribute to the restoration of the physical integrity of the aquatic systems. The addition of log and boulder structures to degraded stream reaches would help the aggregation process, particularly in areas of bedrock dominance. The addition of these structures would also slow high stream velocities that may lead to detrimental scour.

Objective 4: The Proposed Action would maintain the water quality necessary to support healthy riparian, aquatic, and wetland ecosystems. In channel log and boulder placements would help to restore the connectivity of the stream channel with the riparian zone in areas that are currently channel confined and downcut. Restored areas of connectivity may once again function as water storage areas during critical low flow summer months, help reduce water temperatures, and function as a water filter.

Objective 5: The Proposed Action would maintain and contribute to the restoration of the sediment regime under which this aquatic ecosystem evolved. Degraded habitats within the proposed project reaches, lacking in channel structure that prevent normal capture and distribution of sediments, would benefit from in-stream structural placements. The movement of logs and boulders (during the summer months) from roadside staging areas to the stream channel could result in the short term production of a minor amount of sediment in the event of a summer rain storm, but would only have negligible, short term effects on the riparian areas.

Objective 6: The Proposed Action would not have a negative effect on in-stream flows, nor negatively influence the riparian zone and aquatic habitats in the proposed project area, as related to retaining patterns of sediment, nutrient, and wood routing. Log and boulder placements would contribute to the slowing of stream flows and dissipation of stream energies associated with high flows in degraded habitat areas during periods of sediment transfer and deposition. These placements would also help supply water to off channel riparian areas, and help to restore the connectivity of the stream channel with the riparian zone (recharge riparian aquifers) in areas that are currently channel confined and downcut. The extent of the effect on flow related to evapotranspiration and interception and to removal of some hardwoods from and planting of young conifers (proposed riparian conversion) in the riparian zone is not certain but expected to be negligible.

Objective 7: The Proposed Action is not expected to alter the timing, variability, and duration of floodplain inundation and water table elevation in wetlands. There are no wetlands in the proposed project area.

Objective 8: The Proposed Action would contribute to the restoration of the species composition and structural diversity of plant communities and habitat to support well distributed populations of some riparian dependant species as related to requirements of riparian ground water storage, nutrient filtering, interaction between surface flows and ground water storage that create optimal soil moisture conditions for riparian vegetation. The proposed placement of structural materials should increase the amount and period of water storage in proposed project areas and help support riparian associated plant and animal communities. The proposed riparian conversion sites would hasten the development of future large woody debris, which would contribute to the restoration and maintenance of the aquatic system complexity and stability.

Objective 9: The Proposed Action would maintain and contribute to the restoration of habitat to support well-distributed populations of many riparian dependant species by providing an immediate supply of channel structure (log and boulder habitat) to the stream. The placement of structural materials in the channel would help to replace lost habitat necessary for all life cycles of salmonid and other indigenous aquatic species. Large woody debris (LWD) or key piece placements would help maintain future formations of back-water areas, deep rearing habitat (pools), off-channel and high flow refuges, and key spawning habitats. In addition, key piece placements would provide locations for the collection of additional woody debris (jam formation) that lead to increased channel complexity. The proposed riparian action to increase the percentage of conifers in the riparian area (adjacent to the stream channel) would ensure future adequate levels of large woody material in the channel as well as snags and woody debris in the riparian area for associated dependant wildlife species.

Based on the above analysis of the effect on attainment of the ACS objectives, the action alternatives are consistent with the ACS and the objectives for the Riparian Reserves, and would not prevent or retard attainment of any of the ACS objectives.

**ISSUE 2: Effects of cabling on the stability and function of in-stream structures**

Cabling creates a long term stability of in-stream log structures. The cabled structures function properly for substrate collection, habitat improvement and improve ground water recharging. Saleratus Creek has been monitored annually since the original log in-stream restoration projects (log jams) were installed in 1994. The upper projects were cabled and have remained intact. These cabled log jams have retained their structure and function. The new structures are expected to function in a similar fashion.

**D. Alternative 2 - Restoration without Cabling**

**ISSUE 1: Effects on Attainment of ACS Objectives**

Alternative 2 includes management within the Riparian Reserves similar to the Proposed Action and would have similar effects on all ACS Objectives except for long-term stability of the structures.

**ISSUE 2: Effects of cabling on the stability and function of in-stream structures**

The 1994 lower Saleratus Creek log jams were not cabled. The logs in these structures have dispersed along the lower reaches and have not retained their form and function. This dispersal is directly related to no cabling, high water flow within the creek, and lack of root wads on in-stream logs. The new structures would be expected to disperse under periodic high flows.

**E. No Action Alternative**

Under a No Action Alternative, no additional actions would be taken to increase stream structure or restore riparian areas. Under the No Action alternative, no stream channel restoration would be done and riparian restoration would be primarily associated with vegetation manipulation carried out for other purposes. Both the stream and riparian habitats would be expected to show only very gradual recovery over a much longer period of time as a result of management actions taken under this alternative. There would be no impacts to wildlife either through habitat modification or disturbance. The project areas would continue to function minimally as they have in the recent past.

Summary of Effects - Saleratus Creek Restoration			
Issues	Alternatives		
	Restoration with cabling	Restoration without cabling	No Action
<b>Aquatic Conservation Strategy Objectives</b>	Long term restore to Objectives 1,2,3,4,5,6,8,9 Temporary increase in sedimentation; short term degrade to Objective 5	Long term restore to Objectives 1,2,3,4,5,6,8,9 Temporary sedimentation; short term degrade to Objective 5	No change expected to increase sediment in the short term. Longer term for natural restoration to occur.
<b>Effects of cabling on stability of in-stream structures</b>	Long term stability of in-stream structures Restore hydrologic functions	Loss of in-stream structure and function during winter storm events	Potential periodic loss of woody debris and accumulated substrates. Longer term for natural restoration to occur.

## VII. MITIGATING MEASURES

### A. The following mitigating measures have been identified:

1. Guidelines established for timing of stream enhancement work by the Oregon Department of Fish and Wildlife (ODFW) would be adopted. Changes to the guidelines would require concurrence by ODFW.
2. To prevent the further spread of noxious weeds, cleaning of heavy equipment would be required prior to entering project areas.
3. Roothing of heavy equipment would be kept to a minimum in project areas to prevent the spread of noxious weeds.
4. At project sites, as much coarse woody material (including stumps) would be retained as possible.
5. If funding is available, non-native blackberry plants (Himalayan and evergreen) and scotch broom would be pulled within project areas prior to equipment move-in (at road closure projects) and in the year after project implementation to prevent further spread.
6. If needed to help maintain the existing native plant communities, access routes would be seeded with native species mixtures. If native seed is not available and seeding is necessary for erosion control, an annual (70%) and perennial (30%) rye mixture would be used with strict guidelines on seed purity.
7. When working in or next to the stream channel, spill kits and an approved spill containment plan would be included in operations.
8. To reduce the potential for introduction of silt or petroleum products, when stream depth and channel conditions allow, use of a by-pass or retaining basin may be adopted.
9. Terms and conditions for riparian and in-stream work as described in the Programmatic Biological Assessment/Biological Opinion for the Oregon Coast Range Province as related to the Coastal Coho Evolutionarily Significant Unit (ESU) would be followed.
10. If needed, restored project areas would be hydro-mulched. Native or sterile straw bales (or an acceptable substitute) would be used for erosion controls as directed by the contracting officer.
11. Petroleum products, chemicals, and other deleterious materials would be prevented from entering the stream.

12. Activities associated with projects within 100 yards of suitable murrelet habitat would not begin until 2 hours after sunrise and shall end 2 hours before sunset. This restriction would be in effect from July 1 through September 15.
13. When possible, to avoid disrupting deep stream channel substrate during placement of LWD and boulders, utilize heavy equipment with an articulating head that would allow for the placements from one location adjacent to the project area. Heavy equipment with a bucket and thumb set-up or similar device that cannot effectively place materials from outside the stream channel (when deep gravel habitats are present) would be prohibited.

### **VIII. ESSENTIAL FISH HABITAT**

Programmatic Consultation has been completed for Essential Fish Habitat in the Siuslaw River drainage for Oregon Coast Coho Salmon and Oregon Coast Chinook Salmon dated July 2, 2001 (OSB2001-0070-PC).

Coho salmon use Saleratus Creek for migration, spawning, and rearing. The proposed project is in the ESU for the Coastal coho salmon. No spawning or migration of chinook salmon occurs in Saleratus Creek. The proposed action would have no significant long-term adverse effects on EFH within the proposed project area of Saleratus Creek. Short term impacts are associated with placement of boulders and logs as discussed in Biological Opinion #OHB 2002/00879.

### **IX. MONITORING AND EVALUATION**

Prior to implementation of in-stream project work, a photographic and descriptive record is made of existing habitats in project areas. Pre-project inventories are generally conducted in proposed enhancement reaches by BLM. In-stream restoration monitoring has been conducted annually since 1995. BLM has been conducting spawning surveys, population studies and habitat surveys. When possible, project locations are identified using Global Positioning System (GPS). Collected GPS data is then added to the District GIS data system. Pre-work sampling to estimate current juvenile salmonid and other fish species populations is conducted in selected habitats using seining/electrofishing and/or snorkeling. Spawning counts conducted for up to 19 years provide a baseline for pre- and post-project comparison. Post project photographs are taken to show completed work and adjacent habitat prior to exposure to stream flow extremes. Successive photos are taken to document changes in project stability and effects on adjoining riparian and stream habitats. Spawning ground counts are continued in established index areas. Juvenile sampling, using snorkeling and electrofishing, is used to document use of structures. Information is also generally collected on non salmonid fish species both before and after project work. Reference macroinvertebrate samples may be collected at some project sites. Tree survival and growth are documented in riparian restoration areas during at least the first five years following planting. Disturbance areas are monitored for invasive non-native and noxious plant species.

### **X. LIST OF CONTRIBUTORS**

The following Bureau of Land Management specialists have examined the Proposed Action and alternatives and have provided either written or verbal input in this assessment:

Gary Hoppe	Team Lead
Leo M. Poole	Fisheries Biologist
Graham Armstrong	Hydrologist
Karin Baitis	Soil Scientist
Dan Crannell	Wildlife Biologist
Doug Goldenberg	Botanist
Saundra Miles	Recreation Planner
Mike Southard	Archeologist
Mark Stephen	Ecologist
Sharmila Premdas	Aquatic Ecologist
Rob Preece	Fisheries/EA writer

## **XI. CONSULTATION AND COORDINATION**

### **A. Private Lands and Roads.**

Personal communications were conducted with adjoining private land owners with regard to proposed restoration activities and issues that could possibly affect private resources.

### **B. Sensitive/Threatened Species.**

BLM has completed an inventory of resident and anadromous fish species on Federal lands within the project area that are classified as threatened or candidates for listing under the Endangered Species Act.

### **C. Wildlife**

The Programmatic Biological Assessment addressing disturbance and this proposal related to Federally listed or proposed terrestrial animals was submitted to U.S. Fish and Wildlife Service (USFWS). Because of the potential for audio disturbance to marbled murrelets and spotted owls during the critical nesting period, this proposed action for the project areas "May Affect, and is Likely to Adversely Affect" these species. If the Proposed Action is conducted after August 5, 2004 the proposal would "Not Likely Adversely Affect (NLAA)" both the spotted owl and the marbled murrelet, and if the project occurs between July 7 and August 5, 2004 the call would be NLAA for the owl, but still Likely to Adversely Affect for the murrelet. The USFWS response, in the form of a Biological Opinion, was issued on February 5, 2004. Activities associated with projects within 100 yards of suitable murrelet habitat would not begin until 2 hours after sunrise and shall end 2 hours before sunset.

### **D. Coho**

The proposed actions are consistent with the description and terms and conditions under the Programmatic Biological Assessment and Biological Opinion for Ongoing USDA Forest Service and USDI Bureau of Land Management Activities Affecting Oregon Coast Range Province, Oregon for the Oregon Coast coho salmon and designated "Critical Habitat" issued by the National Marine Fisheries Service (NMFS) - June 4, 1999 and extended on December 21, 2001 (OSB2001-0217-PC-RI) and October 18, 2002 (OHB 2002/00879).

### **E. Cultural Resources.**

No cultural resources have been identified to date in the actual project locations. All required cultural resource reviews have been completed. The Saleratus Creek project is within the Oregon Coast Range physiographic province and the terms of Protocol D as defined in the National Programmatic Agreement in Oregon (USDI, 1998) apply.

### **F. Navigability.**

Saleratus Creek and its tributaries are not recognized by BLM as navigable.

### **G. State and County Land Use.**

Aquatic and riparian habitat restoration was found in the District RMP to be compatible with existing State and County land use laws. The proposed actions are compatible with the Coastal Zone Management plans and goals.

### **H. Permits.**

All required permits would be obtained prior to the beginning of project work. The majority of restoration activities would require only ODFW and State Lands waiver permits. Some of the structures may exceed 50 cubic yards of fill and would require permitting through the State Lands-Corps of Engineers excavation and fill permitting process. The proposed project work is covered by State Lands permit, FP-13963, issued on June 19, 2001 and renewed on June 18, 2002 and May 2003.

## **XII. REFERENCES**

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**DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
EUGENE DISTRICT OFFICE**

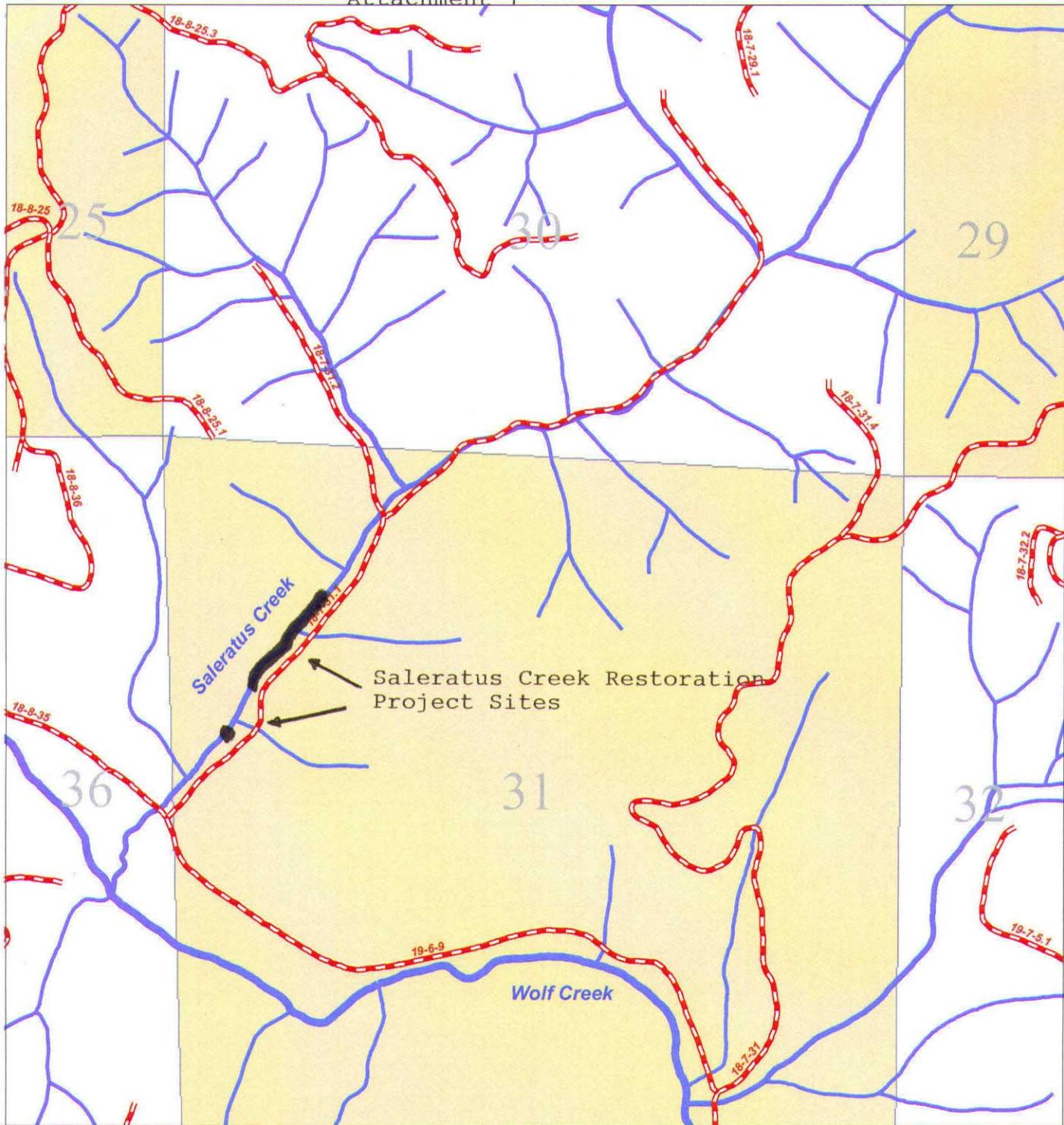
**Preliminary Finding of No Significant Impact  
for  
Saleratus Creek Aquatic Habitat Restoration Plan  
EA No. OR090-EA-04-06**

Determination:

On the basis of the information contained in the Environmental Assessment, and all other information available to me, it is my determination that implementation of the proposed action or alternatives will not have significant environmental impacts beyond those already addressed in the Record of Decision (ROD) for Amendments to Forest Service and Bureau of Land Management Planning Documents Within the Range of the Northern Spotted Owl (April 1994), and the Eugene District Record of Decision and Resource Management Plan (June 1995) as amended by the Record of Decision for Amendments to the Survey and Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines, USDA Forest Service and USDI Bureau of Land Management January 2001, with which this EA is in conformance, and does not, in and of itself, constitute a major federal action having a significant effect on the human environment. Therefore, an environmental impact statement or a supplement to the existing environmental impact statement is not necessary and will not be prepared.

\_\_\_\_\_  
Steven Calish  
Field Manager, Siuslaw Resource Area

\_\_\_\_\_  
Date

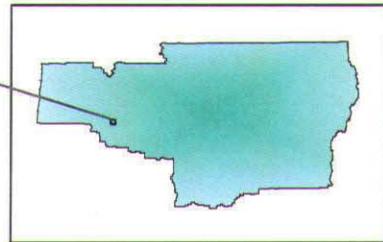
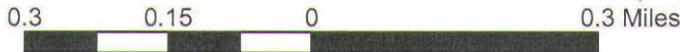


**Legend**

-  Roads
- Stream Order**
-  <=2
-  3-5
-  >=6
- Land Use Allocations**
-  AMA
-  CON
-  DDR
-  GFMA
-  LSR



*T18S, R7W, SEC. 31*  
*Saleratus Creek*



Note: No warranty is made by the Bureau of Land Management as to the accuracy, reliability or completeness of these data for individual or aggregate use with other data. Original data was compiled from various sources. This information may not meet National Map Accuracy Standards. This product was developed through digital means and may be updated without notification.

**Aquatic Habitat  
 Restoration**

# SALERATUS CREEK RESTORATION PROJECTS

