

**ENVIRONMENTAL ASSESSMENT**  
**for the**  
***Waters Creek In-stream Restoration Project***

**EA# OR-117-05-04**

U.S. DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
MEDFORD DISTRICT  
GRANTS PASS RESOURCE AREA

June 2005

Dear Reader:

We appreciate your interest in the BLM's public land management activities. We also appreciate your taking the time to review this environmental assessment (EA). If you would like to provide us with written comments regarding this project or EA, please send them to Abbie Jossie, Field Manager, Grants Pass Resource Area at 3040 Biddle Road, Medford, OR 97504 or email them to [or110mb@or.blm.gov](mailto:or110mb@or.blm.gov).

If you would like to comment confidentially, please be aware that comments, including names and addresses of respondents, will be available for public review or may be held in a file available for public inspection and review unless you request confidentiality. If you wish to withhold your name or street address from public review or from disclosure under the Freedom of Information Act, you must state this clearly at the beginning of your written comment. Such requests will be honored to the extent allowed by law. All submissions from organizations or officials of organizations or businesses will be made available for public inspection in their entirety.

I look forward to your continued interest in the management of our public lands.

Abbie Jossie  
Field Manager  
Grants Pass Resource Area

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
MEDFORD DISTRICT

EA COVER SHEET

RESOURCE AREA: Grants Pass EA Number OR-117-05-04

ACTION/TITLE: Waters Creek In-stream Restoration

LOCATION: T37S, R7W, Sections 5, Wm., Josephine Co.

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## 1.0 Purpose of and Need for Action

This environmental assessment (EA) will assist in the decision-making process by assessing the environmental and human effects resulting from implementing the proposed project or alternatives. The EA will also assist in determining if an environmental impact statement (EIS) needs to be prepared or if a finding of no significant impact (FONSI) is appropriate.

This EA complies with the following documents:

1. *Record of Decision for the Medford District Resource Management Plan (RMP)* (June 1995);
2. *Record of Decision for Amendments to Forest Service and Bureau of Land Management Planning Documents Within the Range of the Northern Spotted Owl* and its attachment A entitled *Standards and Guidelines for Management of Habitat for Late-Successional and Old-Growth Forest Related Species Within the Range of the Northern Spotted Owl* (April 13, 1994).
3. *Record of Decision and Standards and Guidelines for Amendments to the Survey and Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines* (January 2001).
4. *Record of Decision Amending Resource Management Plans for Seven Bureau of Land Management Districts and Land and Resource Management Plans for Nineteen National Forests within the Range of the Northern Spotted Owl. Decision to Clarify Provisions Relating to the Aquatic Conservation Strategy.* (March 2004)
5. *Record of Decision to Remove or Modify the Survey and Manage Mitigation Measure Standards and Guidelines* (March 2004)
6. *Medford District Integrated Weed Management Plan and Environmental Assessment OR-110-98-14.* (April 1998)

## 1.2 Purpose of and Need for Action

In 1983 the Medford BLM installed 25 log weirs through 0.5 mile of Waters Creek on BLM. These structures were placed in the stream to recruit gravel, which increases spawning habitat and pool habitat. While the logs have brought beneficial aspects to the stream, over time they have in some ways degraded the habitat. The stream has low channel complexity, due in part to the log weirs and low levels of large woody material. A portion of the log weirs are no longer functioning in terms of their intended use. Some are undercut by stream flow and others have diverted stream flow against the stream bank. Waters Creek is an important stream for Chinook salmon (*Oncorhynchus tshawytscha*), coho salmon (*O. kisutch*), and steelhead trout (*O. mykiss*). Coho salmon are listed under the Endangered Species Act as a threatened species.

The logs have also created steps in the stream, which impede juvenile salmonid movement. The target jump height for juveniles during low flows is 6" or less. The log weirs have drop distances that range in size from 0 to 1.4 feet with a mean of 0.85 feet (surveyed in June 2003). Naturally occurring logs may create drops, however these logs shift over time and the drops are reduced or removed. The current log weirs on Waters Creek were fixed in place so as to not allow movement. This has created a static condition in which unnatural drops have resulted.

Coho juveniles may spend up to two years rearing in their natal streams before migrating to the ocean.

This makes it important to provide summer and winter rearing areas. Important summer habitat conditions include cool temperature, uninhibited upstream passage, and pools associated with instream wood. Winter habitat needs include cover, off channel/side channel habitat and slow water/pool areas. Spawning Chinook salmon, coho salmon, and steelhead trout require clean spawning gravel, resting pools, and cover (Meehan 1991).

Goals of the project, which will aid in attaining the above mentioned habitat conditions, include:

- Improve fish passage for all life stages of all species.
- Increase channel and pool complexity
- Retain current levels of gravel
- Increase stream sinuosity

### **1.3 Project Location**

The project is on BLM land in the Slate Creek 5<sup>th</sup> field watershed in T37S, R7W, Section 5 (Appendix A: Maps 1 and 2).

### **1.4 Land Use Allocations and Objectives**

The project area is located in a riparian reserve land allocation within the Applegate Adaptive Management Area (AMA). Objectives for these land allocations are in the Northwest Forest Plan (NWFP) (pp. 6-7) and the Medford District Resource Management Plan (RMP) (pp. 26, 36).

## **2.0 Proposed Action and Alternatives**

### **2.1 Alternative 1: No Action**

The no action alternative is defined as not implementing the proposed action alternative. The no action alternative serves as a baseline or reference point for evaluating the environmental effects of the action alternatives. Inclusion of this alternative is done without regard to whether or not it is consistent with the Medford District RMP.

### **2.2 Alternative 2: Proposed Action**

The proposed action is to implement a stream restoration project to increase channel complexity through the BLM stream reach containing existing log weirs.

- Existing weirs would be removed, notched or lowered to reduce the jump at log weirs to <6” at low flows.
- In order to assure gravel retention, logs would be added to the stream.
  - Add logs, with rootwads if possible, in a manner which will increase sinuosity.
  - Logs would be placed to accumulate and form future debris jams.
- Use boulders where stability is critical.

Approximately 40-50 logs would be added to the 0.5 mile stream reach of Waters Creek which flows through BLM. The majority of logs will be at least 24” diameter and 40’ long. The logs would be

keyed in at strategic locations throughout the project area reach. To key a log in means to place the log behind trees next to the channel in order to keep the log in place. The logs would not be cabled in place. The logs would be transported to Waters Creek from Road 35-8-2, the Peavine Road (this tree removal is covered under separate NEPA for tree hazard removal – EA #OR 117-04-01). .

Approximately 5-10 boulders would be placed in the stream channel.

Approximately 10-15 alders would be felled or pulled over with rootwads, in conjunction with the placed logs. Alders would be chosen in areas with high canopy cover.

Manipulation of 16 of the 24 existing log weirs would include removal, notching, or lowering in order to improve fish passage. The target jump height is 6” as measured during low flows.

Excavators would be used to place wood and boulders. The entry points (as few as possible) would be located off Waters Creek Road. Where possible, the original entry points which were used to place the log weirs would be used again. If additional entry points are necessary, locations would be chosen in which trees would not need to be removed. Some limited use of a tractor or an excavator in Waters Creek may be necessary to properly place or move large wood or boulders. A block and tackle system would be used to place the majority of the logs.

### **2.2.3 Project Design Features (PDFs)**

#### **2.2.3.1 Fisheries**

These PDFs are based on the terms and conditions, and reasonable and prudent measures identified in the National Marine Fisheries Service (NMFS) October 18, 2002 programmatic biological opinion:

- ODFW guidelines for timing of in-water work, which is July 1 to September 15 for the Applegate River, will be followed.
- All disturbed areas shall be rehabilitated and stabilized by seeding and planting with native seed mixes or plants.
- Minimize the number and length of access points through riparian areas. Use existing access points where possible.
- Time in which heavy equipment is in the stream channel will be minimized.
- Use whole trees or tree pieces that are 1.5-2.0 times the active channel width with attached root-wads (if available).

#### **2.2.3.2 Other PDFs**

All mechanical equipment will avoid existing stream banks and associated riparian vegetation wherever possible.

Prior to entry in the project area all seals and plugs on earth moving machinery will be carefully

inspected for lubricant and hydraulic leaks. Any worn or leaking plugs or seals will be replaced and reinspected to assure that equipment does not leak on the work site. A BLM approved spill plan will be prepared for the site and operation. All operators and inspectors will be made aware of the spill plan and how to activate necessary actions in case of an accidental spill of petroleum product.

Southwest Oregon District Industrial Fire Precaution Levels (IFPL) restrictions and operating requirements for power driven machinery will be followed.

If any cultural sites are found during project implementation, activities around the site would halt until a BLM archeologist evaluates the site's significance.

### **3.0 Environmental Consequences**

Only substantive site-specific environmental changes as a result from implementing the proposed action or alternatives are discussed in this chapter. If an ecological component is not discussed, it should be assumed that the resource specialists have considered effects to that component and found the proposed action or alternatives would have minimal or no effects. Similarly, unless addressed specifically, the following were found not to be affected by the proposed action or alternatives: air quality; areas of critical environmental concern (ACEC); cultural resources; Native American religious sites; prime or unique farmlands; endangered, threatened, or sensitive plant, and animal species; wild and scenic rivers; and wilderness areas. In addition, hazardous waste or materials are not directly involved in the proposed action or alternatives. Beneficial effects include improved habitat conditions for juvenile and spawning adult salmonids, amphibians and aquatic macroinvertebrates, as well as improved stream complexity and function.

### **3.1 Soil/Water**

#### **3.1.1 Affected Environment**

Waters Creek is a tributary to Slate Creek which feeds into the lower Applegate River. The Waters Creek watershed covers 4,430 acres, of which 13% is BLM land. Waters Creek is perennial with stream gradients ranging from 0.8% to 1.7%. With few large wood pieces, this stream is characterized by riffles and glides with occasional pools. Currently there are 24 log weirs that were placed instream by BLM in the early 80s. Sixteen of these are not performing as designed; the stream is flowing around the outside edge, under the structure, or the structure has broken apart. Generally, the weirs have caused the stream width to be greater upstream of the structures than it would be without the weirs. This stream naturally recruits gravel from sites upstream located on Forest Service land and adjacent slopes. The Waters Creek Road is located adjacent to the stream, on the footslope to the east.

Soils (Ref. SCS, Soil Survey of Josephine County, OR, 1983) in the project area are:

- 1) 67C (Ruch gravelly silt loam, 7 to 12% slopes) is in a narrow band of opposing footslopes within which Waters Creek is located. This soil is well drained, with an effective depth of 40 to 60 inches, with gravelly clay loam subsoil. When surface mineral soil is exposed to rain this soil can seal off causing water to run off and erode soil rather than infiltrate. This soil may



provide some gravel to Waters Creek. This soil is low strength, and bank stability is questionable.

2) 6F and 7F (Beekman-Colestine complex, 50 to 80% north and south slopes, respectively) are on adjacent dissected slopes to the east of Waters Creek. This soil may indirectly provide some gravel to Waters Creek.

3) 72F (Speaker-Josephine gravelly loams, 35 to 55% south slopes) is on adjacent slopes to the west of Waters Creek, but on the uphill side of the road.

Existing condition of the stream and adjacent riparian reserve is functioning, but at risk. Stream restoration efforts on neighboring private lands and Forest Service upstream have helped to develop an improving upward trend in quality of riparian function. However, Waters Creek Road, landings and pullouts, in addition to building pads, buildings and past logging within the riparian reserve have compromised the function of the stream by:

- 1) infringing on and constraining the channel;
- 2) changing drainage timing from natural to quicker peaks with additions of fine sediment
- 3) increasing summer temperatures through reduced shade vegetation; and
- 4) minimizing coarse wood in and near the stream, creating a simplified channel with less structure.

The Forest Service is in the process of reducing fire hazard on approximately 1,700 acres in the upper watershed. About 1,300 acres have been treated so far (pers. comm. Don Bellville, USFS). This may create a slight increase in the stream yield throughout the year, which would benefit stream flows, especially summer flows, in Waters Creek for the short term with no measurable effect in peak flows.

### **3.1.2 Environmental Consequences**

#### **3.1.2.1 Alternative 1: No Action**

The no action alternative will result in the continued presence of the low channel and riparian large wood component and lack of channel structure. The channel would continue to be overly wide upstream of weirs, though as they deteriorate the channel will slowly narrow. As this happens, the amount of pools would likely drop. However, in the long term (10+ years) there would be an increase in large wood recruitment which would reverse this trend.

#### **3.1.2.2 Alternative 2: Proposed Action**

Adding large wood and boulders would enhance structural complexity and increase channel roughness. This will change stream flow patterns, increasing meanders and flow in side channels within flood plain margins. The amount of pools and pocket water would increase though the average size of pools will likely decrease. The total amount of gravel sequestered should remain the same or may increase slightly. The channel would narrow. More stable debris jams would form.

With some use of large mechanical equipment there would likely be small, localized, short-term additions of sediment to Waters Creek. With implementation of the PDFs for channel protection and

erosion control (page 3), the additions of sediment would be minimal.

No increases in stream temperature are anticipated by this action as there should be little to no shade reduction in terms of tree canopy loss. There will be increases in local shade due to placement of large wood and some boulders.

Some turbidity may result from operation of equipment in the stream. However, this would be very short-term with no effect on aquatic organisms. It would also dissipate down stream from the project. There would be no additions to existing cumulative effects at any watershed scale. This is because all possible negative effects due to this project are short term and localized with no possibility of accumulation with effects from other land uses.

This project is not expected to impact stream flows, including peaks and yield.

## **3.2 Fisheries**

### **3.2.1 Affected Environment**

Waters Creek, located in the Lower Applegate 5<sup>th</sup> Field watershed, is a perennial, low gradient fish bearing stream, characterized by riffles. Fish presence in Waters Creek includes coho salmon (*Oncorhynchus kisutch*) and Chinook salmon (*O. tshawytscha*, steelhead/rainbow trout (*O. mykiss*), cutthroat trout (*O. clarki clarki*), and sculpin (*Cottus sp.*). Pacific lamprey (*Lampetra tridentate*) most likely are also present in Waters Creek. Waters Creek was listed in 2002 on DEQ's 303(d) list for poor water quality due to stream temperature exceeding 66.9°F in summer from river mile 2.4 to 4.3.

Within the Slate Creek watershed, Waters Creek is an important fall chinook stream. Waters Creek is also an important spawning and rearing stream for summer steelhead, coho, and resident cutthroat trout. Coho are listed as threatened under the Endangered Species Act. Waters Creek is an ODFW core area for coho.

The Applegate River Watershed Council (ARWC) completed the Slate Creek Watershed Assessment in 2002 which includes the Waters Creek subbasin. Large woody debris recruitment potential was found to be low in 90.6% of the subbasin, and shade values moderate in 70% of the watershed. Waters Creek was also found to maintain very little pool habitat and channel complexity.

ODFW completed comprehensive aquatic inventory surveys of Waters Creek habitat in September 1996. ARWC summarizes the surveys completed on the lower reach (Reach 1) as a pool-riffle system. Channelization along the lower reach has led to poor channel conditions and loss of floodplain features which function to store water and reduce stream velocities. Logs were placed in Waters Creek on private lands by ARWC to help restore the creek in these areas.

ODFW conducted a habitat survey in Waters Creek in 1996. Reach 2 of this survey starts at Bear Creek and goes up to the next tributary on the right. Reach 2 closely matches up with the BLM section of the stream, comprising about 90% of the BLM section and includes no other land owners. Reach 2 contains the 24 log weirs which were placed in Waters Creek by the BLM. ARWC summarizes the ODFW surveys of this middle reach as a response reach classified as a forced pool-riffle system. The

forced pool-riffle channel relies on large roughness elements such as wood and boulders to create pools and channel complexity. Low wood volumes in Reach 2 are responsible for channel simplification and low pool habitat.

ODFW has identified fish habitat benchmark standards. These benchmarks provide a means of assessing the quality of different components of fish habitat in a stream system as well as identifying limiting factors for trout or salmon production and survival. In the BLM portion of Waters Creek ODFW found undesirable conditions based on the habitat benchmarks for large woody debris (LWD), key pieces of LWD, volume of LWD, and riparian conifers. Complex pools were just above the undesirable benchmark, but not at the desirable level.

ODFW performed coho spawning surveys in Waters Creek. Although coho was the target species, chinook were observed and noted. The BLM conducted a chinook and coho spawning survey in 2004 within the BLM portion of Waters Creek and found a peak of 17 chinook in 1996 and no chinook in 1997. In the 2004 BLM survey, one chinook was observed, with the AUC (area under the curve) for chinook at 0.6. "Area under the curve" is an estimate for the number of fish present within the surveyed reach through the spawning period. The AUC for coho, based on the ODFW survey of the BLM portion of Waters Creek, for 1996 and 1997 was 12 and 13 respectively. The 2004 coho survey conducted by BLM found an AUC for coho to be 30. Based on the 1996, 1997 and 2004 spawning survey data, coho numbers have increased in Waters Creek.

A macroinvertebrate survey was conducted in Waters Creek in 1996. The survey site was at the mouth of Bear Creek. Using a 3-Habitat Protocol of erosional, margin, and detritus, relative abundance and diversity were estimated. Results indicated Taxa Richness was low, Positive Indicator Taxa was generally scarce, Negative Indicator Taxa was rare to absent and Biotic Integrity was low.

The log weirs have caused the stream to aggrade, which has resulted in shallow, wide habitat units behind the logs. By spreading the flow out in long shallow glides, stream temperature may increase. The logs have also reduced channel complexity and impeded juvenile salmonid migration.

### **3.2.2 Environmental Consequences**

#### **3.2.2.1 Alternative 1: No Action**

The no action alternative would maintain low channel complexity of shallow, wide stream segments which decreases available rearing habitat and may cause high stream temperatures. The direct effect is a reduction in anadromous and resident fish production and survival.

Poor water quality in lower stream reaches makes access to cooler water in the upper stream reaches especially critical in the summer. Under the no action alternative upstream access would continue to be inhibited in the short term and salmonid production and survival may decrease. The weirs would continue to deteriorate and eventually passage would be restored through the weirs.

#### **3.1.2.2 Alternative 2: Proposed Action**

Stream dynamics and processes are better understood today than twenty years ago when the original log weirs were installed. The proposed action strives to meet habitat benchmarks established by the

ODFW for large woody material and complex pools. The proposed action is designed to meet the habitat benchmarks by adding wood to Waters Creek as it would occur naturally.

Adding large wood and boulders would allow the stream to become more effective at dissipating stream flow energy, controlling the movement of sediment and small organic matter, and provide complex habitat for fish, amphibians and aquatic macroinvertebrates. Approximately 0.5 mile of Waters Creek would directly benefit from the proposed action. Improving passage at the weirs would also make available additional upstream habitat for salmonids.

Shade loss from alders felled into the stream would not result in a stream temperature increase. Alders would only be felled in areas of high canopy closure and their removal would result in a negligible decrease in canopy or shade.

Instream work will be conducted according to Oregon Department of Fish and Wildlife guidelines which are between July 1 and September 15. Flows are minimal at this time and there are no eggs or fry in the gravel, and fish are not spawning at this time. By following these guidelines, there will be negligible direct effects on salmonid populations.

Any sediment delivery to the stream as a result of equipment crossings and placement of large woody debris and boulders is anticipated to cause highly localized, short term impacts at the project level, and no impacts at greater scales (sixth and fifth field). Sediment disturbed by the actions listed above would dissipate quickly and any resultant turbidity outside of the project area would be of no consequence. The minimal increases of sediment delivery produced from these proposed actions are not expected to appreciably affect the survival or production of salmonids. Project Design Features included in the proposed action would minimize negative impacts to aquatic resources.

Future or on-going activities in the Lower Applegate 5<sup>th</sup> field watershed on federal land include the North Murphy Landscape Management Project, which entails logging and continued pile burning. Prescribed burning in the Round Bull Landscape Management Project will continue. In addition, small scale fuels mitigation projects will continue on federal land in the watershed. The Forest Service will continue to implement fuels treatment in the Waters Creek Watershed. Streamside shade and coarse woody material on federal lands are expected to increase over time. Streams and riparian areas with federal ownership are in better condition than streams on private lands. This trend will likely continue.

Current resource management practices and water diversions on private lands will continue to limit potential for recovery of salmon and steelhead habitat and populations. Private forest lands will likely continue to be managed for wood production. Harvest on private lands includes minimal buffers. Quality of stream and riparian habitat on private land is expected to decrease as a result of continued timber harvest in unentered or lightly harvested timber stands. The amount of coarse woody material in the riparian area on private land is expected to continue to diminish due to natural processes and timber harvest. The effects of harvest-associated road activities on private lands could cause adverse effects to fish, both short and long term, direct and indirect. The cumulative effects of management activities on private land will continue to alter the timing and quantity of erosion and will change instream channels, all of which have impacts to fish production.

Potential cumulative impacts of the proposed action on streams and riparian areas are negligible, due to the localized, short term, minimal effects of the proposed action. In addition, the cumulative effects

of the proposed action would be inconsequential when compared to the effects of water withdrawal, development, harvest and road use on private lands. This assumes that the rate of development, water withdrawal, timber harvest and new road construction on private land would remain at current levels.

The beneficial cumulative effects of the proposed action, when combined with the larger effort in the Waters Creek and Slate Creek watersheds, and the Applegate River basin would aid in the recovery of trout and salmon populations. Restoration efforts of the BLM, Forest Service and the Applegate Watershed Council in the Waters Creek watershed will continue to improve fish habitat, production, and survival by improving winter and summer rearing conditions for juveniles, spawning habitat and fish passage. The BLM will be replacing a culvert at the mouth of Bear Creek, which will open additional salmonid spawning and rearing habitat. The Forest Service will be replacing a culvert on Waters Creek in T36S R7W section 32. The Forest Service has also placed large woody material in Waters Creek upstream from the BLM proposed project area in T36S R7W section 32. The Applegate Watershed Council has and continues projects on private land in Waters Creek placing large woody material and boulders, riparian planting, and improving water withdrawal sites.

### **3.3 Botany**

#### **3.3.1 Affected Environment**

Botanical surveys were conducted in the project area for vascular and non-vascular plants on April 25, 2003. Waters Creek flows south through section 5 at approximately 1,200 feet elevation. No federal or state listed or Bureau special status vascular or non-vascular species (BSS) were found during the survey. The riparian zone supports an abundance and diversity of vascular and non-vascular plants. *Acer macrophyllum*, *Alnus rubra*, *Psuedotsuga menziesii*, *Fraxinus latifolia*, *Acer circinatum*, *Taxus brevifolia*, *Philadelphus lewisii*, *Oemleria cerasiformis* and *Symphoricarpos albus* provide thick overstory and understory cover. Various riparian herbs, forbs and sedges provide dense ground cover. Upland from the creek the plant association is PSME-QUKE-RHDI. Two occurrences of *Cypripedium fasciculatum* (a Bureau Sensitive species) are located upslope adjacent to the project on the west side of the creek. The sites would be flagged and avoided by equipment and excavators. Potential habitat exists upslope throughout the project area. No non-vascular BSS species have been found adjacent to or in the vicinity of the project.

The project is within the range of the federally listed *Lomatium cookii* and *Fritillaria gentneri*. No occurrences were found during surveys and no potential habitat exists within the project area.

Non-native species occur along the roadside, but not in the riparian zone. No state-listed noxious weeds were located during the survey.

#### **3.1.2 Environmental Consequences**

##### **3.3.2.1 No Action**

The existing vegetation would remain and continue on the same successional trajectory and the risk of weed and non-native plant invasion into this area would remain low.

### **3.3.2.1 Proposed Action**

As no populations of federally listed or BSS plant species were located, no direct effects to these species are expected. The two Bureau Sensitive populations found adjacent to the project would not be affected since they would be avoided by equipment. Indirect effects would not occur since the riparian trees to be felled are not providing cover to these populations and trees along the perimeter of populations would be flagged and left standing. Because no direct or indirect effects would occur to these species, no cumulative effects would occur.

## **3.4 Wildlife**

### **3.4.1 Affected Environment**

The riparian area, which may serve as a migration and dispersal corridor for wildlife, has been heavily affected by past management actions and current land ownership. The Waters Creek Road runs alongside and in the riparian corridor and private lands both upstream and downstream are developed, limiting the usefulness of this riparian area for migration and dispersal by wildlife. Habitat for one bureau assessment amphibian species is in the project area, the foothill yellow-legged frog (*Rana boylei*), though it was not documented during fish or other stream surveys. Other amphibians such as the Pacific giant salamander (*Dicamptodon tenebrosus*) and the Western toad (*Bufo boreas*) may also inhabit Waters Creek.

### **3.4.2 Environmental Consequences**

#### **3.4.2.1 Alternative 1: No Action**

There are no anticipated effects to any wildlife species listed under the Endangered Species Act or to any Bureau special status wildlife species. Under the no action alternative, the weirs and low channel complexity of shallow, wide stream segments will continue to impede migration and dispersal of amphibians, and may restrict larval / sub-adult stages to small areas of the stream. The lack of sinuosity in the stream may inhibit reproduction of those species which require small backwater areas for egg laying.

#### **3.4.2.1 Alternative 2: Proposed Action**

There are no anticipated effects to any wildlife species listed under the Endangered Species Act. There are no spotted owl activity centers or bald eagles nesting in the vicinity of the project. The proposed action may have some direct affects on individuals of sensitive species and may result in short term affects to aquatic habitat.

Heavy machinery access to the stream may directly affect individuals of sensitive species. However, the number of access points would be minimized and would affect only a small area of streamside habitat. In the long term, the proposed action would increase rearing habitat and provide for access to longer reaches of the stream by aquatic invertebrates and amphibian larvae.

The proposed actions may disrupt some individuals of sensitive species and could cause short-term

habitat loss in some cases. However, none of the alternatives are expected to affect long term population viability of any species known to be in the area or lead to the need to list sensitive wildlife species. Increasing complexity of the stream channel would improve habitat for these species and other amphibians.

Pulling of alders into the stream would not have any substantial effect on use of the riparian corridor for migration or dispersal of terrestrial species because canopy cover would not be substantially reduced.

The project would not exacerbate the effects of actions on private and other non-federal lands. Riparian habitat is expected to continue to improve on federal lands (BLM and Forest Service) and likely remain in its current state on non-federal lands, therefore there will be no addition to cumulative effects from the proposed action.

In summary, the proposed action would not have substantial direct, indirect or cumulative effects on wildlife or wildlife habitat because 1) PDFs for fisheries, and stream channel and riparian habitat protection (page 3) would minimize impacts on wildlife species and habitats by restricting activities to outside of the prime breeding season for amphibians; 2) access by heavy machinery would be limited; and 3) there would be limited shade reduction as trees would be pulled into the stream only in areas of high canopy cover. All effects and disturbance would be short-term in duration and long-term effects should benefit amphibians by increasing breeding and larval habitat.

### **3.5 Recreation and VRM**

#### **3.5.1 Affected Environment:**

The Waters Creek Interpretive Trail, managed by the US Forest Service, is adjacent to the project area. There is a parking area, toilet and trailhead approximately 0.5 miles from the proposed project site. Dispersed recreational uses, such as driving for pleasure, hunting, and horseback riding also occur in the area. The BLM lands are managed as VRM Class III. VRM Class III objectives are to partially retain the existing character of the landscape. Moderate levels of change to the characteristic landscape are acceptable. Management activities may attract attention but should not dominate the view of the casual observer.

#### **3.5.2 Environmental Consequences**

##### **3.5.2.1 Alternative 1: No Action**

In the no action alternative, recreational use of the area would remain as it currently exists. The road would remain open and unencumbered by machinery manipulating rocks and trees during project implementation. The visual landscape would remain the same.

##### **3.5.2.2 Alternative 2: Proposed Action**

In the short term, large vehicles may partially block the roadway while rocks and trees are placed in the stream. This activity shouldn't impede recreational use of the area in any substantive manner.

Visually, the stream would be somewhat altered in appearance, with more logs and boulders in the stream, but it would not be visible from the Waters Creek Road. The proposed action would conform with VRM III objectives.

#### **4.0 Agencies and Persons Consulted and Document Availability**

BLM sent 53 scoping letters to the public and agencies (Oregon Department of Fish and Wildlife, Oregon Department of Environmental Quality, Oregon Department of Forestry, Rogue/Siskiyou National Forest, Josephine County, and Oregon Department of Water Resources). It was also posted in the Medford Messenger. No comments were received during the scoping phase.

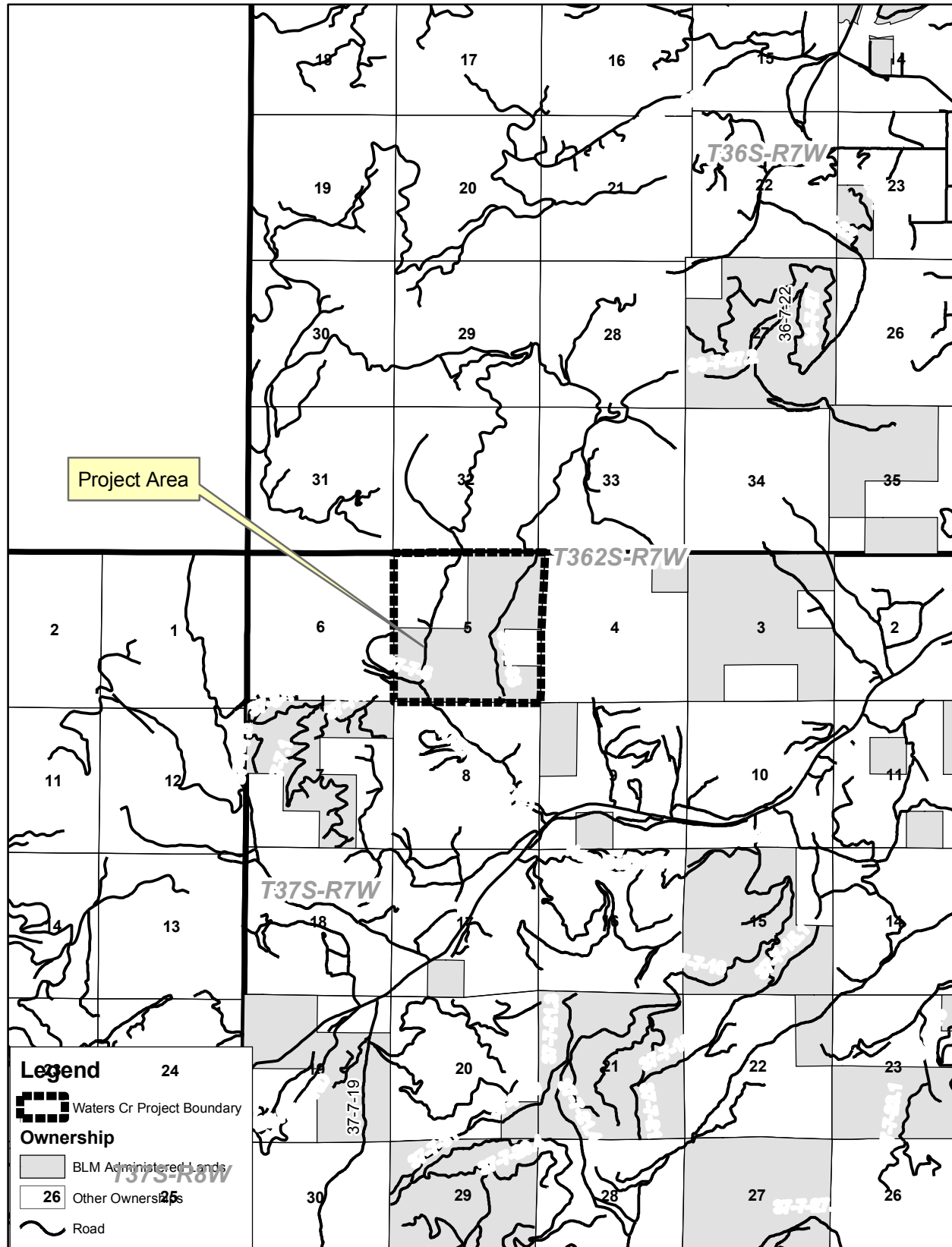
Copies of the EA will be available for public review in the BLM Medford District office, the Greenfield office in Grants Pass and online at [www.or.blm.gov/Medford/planning](http://www.or.blm.gov/Medford/planning). A formal 15-day public comment period will be held following an announcement in the Grants Pass Daily Courier. Written comments should be addressed to Abbie Jossie, Field Manager, Grants Pass Resource Area, at 3040 Biddle Road, Medford, OR 97504. E-mailed comments may be sent to [or110mb@or.blm.gov](mailto:or110mb@or.blm.gov).

#### **References:**

Meehan, W.R. ed. 1991. Influences of forest and rangeland management on salmonid fishes and their habitat. American Fisheries Society Special Publication, Bethesda, Maryland.



# Map 1 - Waters Creek Stream Restoration Vicinity Map



1:63,360

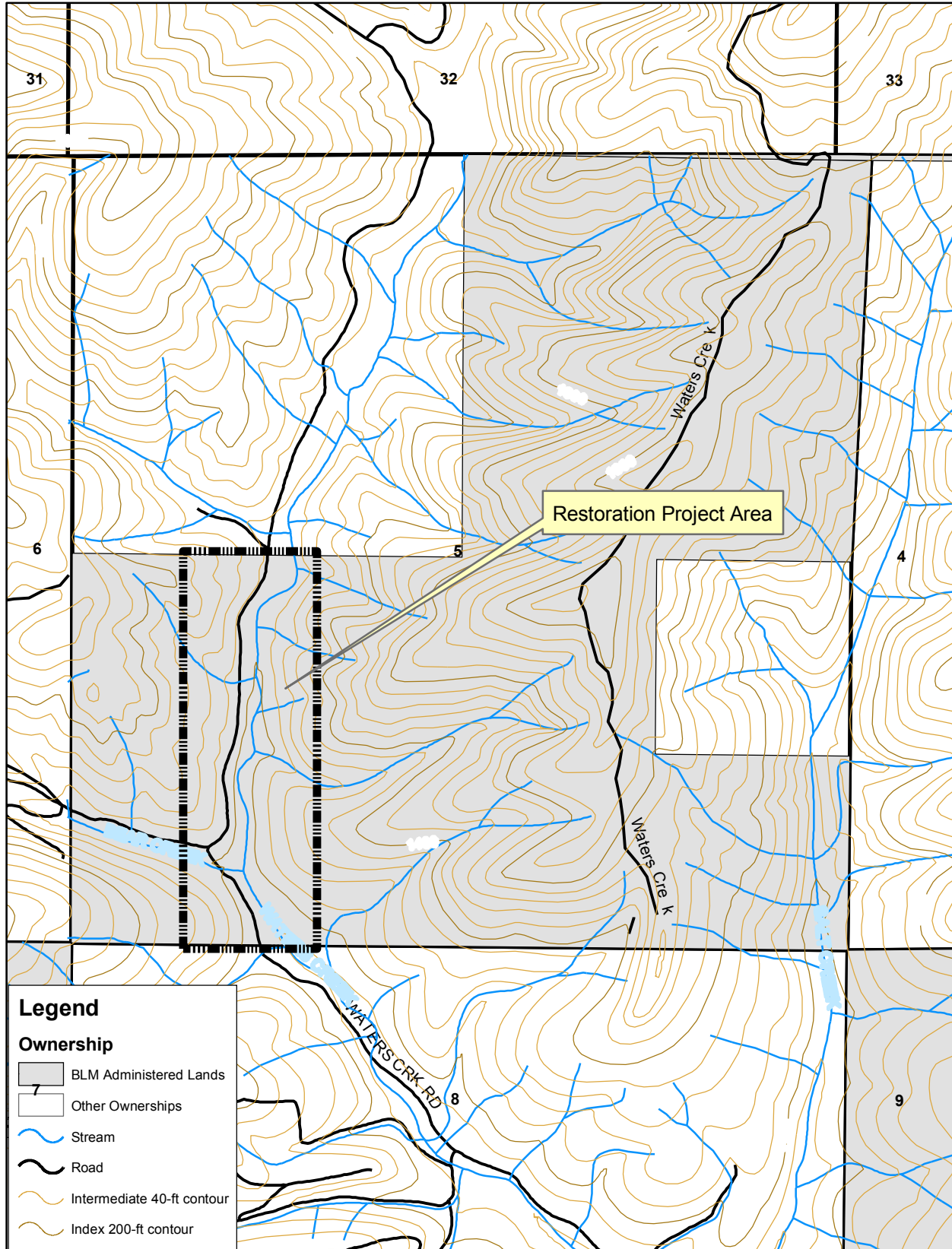
0 0.45 0.9 1.8 Miles

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 were 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.

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 D:\home\dglover\misc\New\_GP\_Geodatabase.mdb - new\_gp\_pls



# Map 2 - Waters Creek Stream Restoration Project Area Map



T37S-R7W

1:12,000

0 0.125 0.25 0.5 Miles

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 were 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.

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