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Forest  
Service

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# Preliminary Assessment

## 2009 Clackamas Restoration Projects

Clackamas River Ranger District, Mt. Hood National Forest  
Clackamas County, Oregon

The project is located throughout the Clackamas River watershed.

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This photo shows damage caused to trees by shooting.

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## 1.0 PURPOSE AND NEED FOR ACTION

The proposed action includes several restoration projects including restoring shooting areas, replacing a culvert, and in-stream projects to enhance fish habitat.

**Management Direction** – The proposed action has been designed to meet the goals and objectives of the documents listed below. This assessment is tiered to the Environmental Impact Statements and the listed plans are incorporated by reference.

- The Mt. Hood National Forest Land and Resource Management Plan as amended (referred to as the **Forest Plan**). The Forest Plan contains standards and guidelines applicable to this project.
- The Forest Plan was amended by the Record of Decision and Standards and Guidelines for Management of Habitat for Late-Successional and Old-Growth Forest Related Species Within the Range of the Northern Spotted Owl. (hereafter referred to as the **Northwest Forest Plan** or NFP). The NFP contains standards and guidelines for Matrix, Riparian Reserves and Late-Successional Reserves.

The Forest Plan has objectives to “Manage forest recreational access to protect natural resources, provide for public safety and minimize conflicts among the various users of the Forest,” and to “Maintain or increase fish habitat capability and assure long-term sustained production of fish,” (page Four-3).

### 1.1 Unsafe shooting

#### **Purpose and Need**

Shooting guns whether for hunting or target practice is a valid recreational use of public lands. However there are places where shooting is unsafe and there are practices related to target shooting that can cause resource damage. The Memaloose Area includes road 4500 and its tributaries from the bridge over the Clackamas River for approximately 7 miles. Target shooting in this area is causing resource damage and is a safety hazard. This is an activity that occurs dispersed across a large landscape. Many of the sites have no backstops, and shooters are unaware that bullets are reaching nearby campgrounds, a trail, a river used for fishing and rafting, a highway and other shooting sites. Near the shooting sites, bullets are causing severe damage to trees: many trees are killed and actually felled by bullets. At the shooting sites, there is a large quantity of debris and garbage. Items such as televisions are brought in as targets and left behind along with bullet shells, broken glass and dumped household garbage. Forest visitors that attempt to use road 4500 are often afraid to enter the area due to the continual sound of gun fire. Forest visitors that do drive road 4500 are repulsed by the extent of the damage and trash in what they feel should be a natural landscape. Along with the impact of the shooting, is the related impact of the shooter’s vehicles. Shooters are creating off-road parking areas and breaching road closures to maneuver their vehicles close to where they want to shoot. This creates compaction and exposes bare soil to erosion. Shooters are encouraged to use places such as rock quarries as safer alternatives to the sites along road 4500. The purpose of the project is to restore damaged shooting areas and move shooting to safer areas.

Road 4500 and the shooting sites are on both Bureau of Land Management and National Forest lands. The Clackamas County Dump Stoppers program has worked repeatedly to clean up these sites. The BLM already has an Environmental Assessment titled “Cascades Resource Area Soil Rehabilitation – December 2006” that addresses some of these issues.

**Proposed Action**

The Forest Service and BLM would designate a long-term area closure that would prohibit shooting in these areas and facilitate law enforcement efforts.

Restoration would include actions such as placing boulders along the road, berming, obliterating old temporary roads and user created roads, closing system roads with berms, re-contouring/decompacting, revegetating and removing trash. The goal is to contain vehicles on road 4500 and block places where vehicles pull off the road. Signs will be placed describing more appropriate places for shooting. Specific site details and photographs are in the analysis file. Approximately 20 sites are in need of restoration. Also included in the proposed action is the maintenance of these sites over time.

The following roads would be closed with berms. If necessary, other temporary closure devices may be used during project implementation.

Road number	Length - miles	Comments
4500-057	0.34	Includes tributary road 4-5E-32
4-5E-29.1	0.31	
4500-280	1.88	Includes tributary roads 048, 290 and 300
4500-310	2.93	Includes tributary roads 311 and 316
4500-320	1.17	
4500-340	3.89	Includes tributary roads 350, 360 and 055

**1.2 Culvert Replacement**

**Purpose and Need**

Road 4620 has a culvert on an unnamed stream (near Sandstone Creek) that is not large enough to accommodate a 100-year flood event and associated sediment and debris. There is a large beaver dam upstream from this culvert. The road is at risk of failure if this culvert plugs. There is an urgent need to upgrade this structure.

**Proposed Action**

The culvert would be replaced with a new structure.

### **1.3 In-stream projects**

#### **Purpose and Need**

In-stream conditions are sometimes not optimal for fish. Streams can be improved by replacing lacking elements or by repairing existing features.

#### **Proposed Action**

Projects include the installation of logs in rivers and the creation of side channels. Side channel projects include Upper Clackamas at mile post 41, Hot Springs Fork at river mile 2.4, and Upper Clackamas at the existing side channel known as the Cedars. Large wood would be placed in the Upper Clackamas above road 4670 and above road 4690 and in the Collawash River. Included in the proposed action is the maintenance of these structures that may be needed over time.

### **1.4 Design Criteria**

#### **1. Adaptive Management**

This project will utilize the concept of adaptive management. The proposed action sections above describe the strategies that are currently considered appropriate for each area based on initial field visits. However, the exact treatment details may be adjusted at the time of implementation. The potential actions described would be tailored to changing site-specific conditions with the objective of achieving the purpose and need.

This adaptive management strategy is needed because conditions in the field often change somewhat between the planning and implementation stages. Because funding sources may not be immediately available, project implementation may take several years. For example, new shooting sites may be created by users or existing sites may be changed by users. River conditions also sometimes change during flood events.

Before changes are made, an interdisciplinary team would be assembled to review the change and make recommendations to the line officer. The review would consider whether the change meets the purpose and need, would consider its cost effectiveness and would determine whether the scope of the change and the anticipated effects fall generally within the range of effects and benefits described in the EA. It would consider effects and benefits to threatened, endangered, sensitive or rare species of plants and animals. The design criteria below would be incorporated unless there is the need for special mitigation or seasonal restrictions. If necessary, a supplemental heritage resource report would be prepared. Documentation of the change would be signed by the line officer and kept in the analysis file.

## 2. Seasonal Restrictions

- 2.1 **Peregrine Falcon:** For the Memaloose Project, no activities occurring north of road 4500-057 that produce noise would be allowed between January 1<sup>st</sup> and July 31<sup>st</sup>.

For the in-stream projects on the Clackamas River, no activities would occur between January 1<sup>st</sup> and July 31<sup>st</sup> between the confluence with Tar Creek and 1 mile east of the junction of roads 4600 and 6300.

For the in-stream projects on the Collawash River, no activities would occur between January 1<sup>st</sup> and July 31<sup>st</sup> between the confluence with the Clackamas River to where the power line crosses.

No helicopter use would occur for in-stream projects that are located in the same areas described above between January 1<sup>st</sup> and October 31<sup>st</sup>.

- 2.2 **Deer and Elk:** The portion of the Memaloose Project Area within crucial winter range would require a seasonal restriction prohibiting use of heavy equipment and chainsaws from December 1<sup>st</sup> to March 31<sup>st</sup>. This affects the portions of the project on road 4500-340 and north of the 4500-340 junction.

- 2.3 **Fish:** In-stream projects would only occur within work timing guidelines for in-stream projects set up by Oregon Department of Fish and Wildlife (ODFW) to protect incubating fish eggs and spawning fish. In-stream work would occur between July 15 through August 31. This restriction may be waived if ODFW biologists concur and a documented waiver is granted by NOAA Fisheries. This restriction applies only to the portion of a project where in-stream work is conducted.

3. **Erosion:** To reduce erosion, bare soils would be revegetated. Grass seed and fertilizer would be evenly distributed at appropriate rates to ensure successful establishment. Mulch may be used.

Native plant materials are the first choice in revegetation of bare soils. Non-native, non-invasive plant species may be used if native plant materials are not available or as an interim measure designed to aid in the re-establishment of native plants and to increase forage for deer and elk. Invasive plant species would not be used.

**Grass seed** would preferably be certified by the states of Oregon or Washington or grown under government-supervised contracts to assure noxious weed free status. In certain cases, non-certified seed may be used if it is deemed to be free of Oregon State Class A & B noxious weeds.

When **straw and mulch** are utilized, it would originate from the state of Oregon or Washington fields, which grow state-certified seed, or grown under government-supervised contracts to assure noxious weed free status, or originate in annual ryegrass fields in the Willamette Valley. In certain cases, straw or hay from non-

certified grass seed fields may be used if is deemed to be free of Oregon State Class A & B noxious weeds.

#### 4. **Invasive species:**

All off-road equipment is required to be free of soil, seeds, vegetative matter, or other debris that could contain or hold seeds prior to coming onto National Forest lands. Contracts would include provisions to minimize the introduction and spread of invasive plants. These provisions contain specific requirements for the cleaning of off-road equipment.

5. In stream projects would be carefully designed and implemented to avoid impacting cold water corydalis, *Corydalis aquae-gelidae*, a sensitive aquatic plant.

### 1.5 **Public Scoping**

A scoping letter was sent out on September 22, 2008. The projects have been published in the Forest's schedule of proposed actions (SOPA).

### 1.6 **Issues**

No significant issues were identified that would aid in the formulation of other viable alternatives.

- 1.6.1 Some shooters that use the Memaloose area want to continue to use the areas that would be closed with the proposed action. There is also a concern expressed by some that closing one area would just shift shooting to some other place.

## 2.0 **MANAGEMENT ALTERNATIVES**

No alternatives to the proposed action have been identified.

## 3.0 **ENVIRONMENTAL CONSEQUENCES**

### 3.1 **Fish and Water Quality**

The fisheries Biological Evaluation contains details that are summarized below.

#### **Existing Condition**

The Clackamas River Basin is located in Clackamas and Marion Counties, Oregon, east and south of the Portland Metropolitan area. The Clackamas River is a major tributary to the Willamette River, entering the Willamette at approximately river mile (RM) 25.

There are approximately 3,100 miles of streams within the Clackamas Basin. The waters of the Clackamas River basin provides important habitat for native populations of fish in over 900 miles of streams. Approximately 310 miles of streams support anadromous fish populations while 620 miles of stream support resident salmonid species only. The watershed is home to one of the last two significant runs of wild late winter coho in the lower Columbia Basin. The watershed also supports one of only two remaining runs of spring chinook in the Willamette Basin. The watershed also supports a significant population of winter steelhead, cutthroat trout and native lamprey. Throughout the year, there is a steady flow of fish moving through the Clackamas River and tributaries.

Past land management activities have had impacts on watersheds throughout the basin, but natural conditions and processes, such as highly erodible soils, also dictate current conditions. Management activities, which have had negative impacts on fish and aquatic resources, include road building, timber harvest, water diversions, hydroelectric development, grazing, and recreation. Today the Clackamas River Basin still supports regionally significant runs, however, fish populations in the basin and the lower Columbia River have declined from historic levels, with some fish runs diminished to the point of being federally listed as threatened species.

## **Shooting**

### **Existing Condition**

Vehicles at shooting sites are driving off roads creating bare compacted soil that is prone to erosion.

### **Effects of Proposed Action**

These projects would restore aquatic habitat by reducing sediment delivery to streams. Indirect effects are possible from increased delivery of fine sediment from erosion of exposed soil during and after project implementation.

The proposed projects would result in improved long-term water quality. Areas of chronic sediment supply would be stabilized and re-vegetated. Restoration treatments would hasten the recovery of watershed health and long-term water quality conditions.

## **Culvert replacement**

### **Existing Condition**

The culvert is undersized and there is a risk of road failure.

### **Effects of Proposed Action**

In general, culvert replacement projects would result in short-term input of sediment (immediately and up to 1 to 2 years after project completion) downstream from the project site. It is likely that some sediment would be delivered to areas of existing fish habitat. Mitigation measures that are focused on reducing sediment production include operating in the low-water season, isolating the work site from exposure to water, and revegetating disturbed areas after completion of work. These measures would minimize the amount of sediment entering surface water.

These projects would not only benefit fish movement, they would decrease aquatic

habitat fragmentation. Larger culverts or bridges would allow wood, water and sediment to move more naturally through these crossing sites.

## **In-stream projects**

### **Existing Condition**

In-stream conditions are sometimes not optimal for fish. Pools and side channels that might have been functional in the past have been affected by road construction and floods.

### **Effects of Proposed Action**

Many projects involve work within or adjacent to the active stream channel. They could deliver sediment, create turbidity, and cause stream bank erosion. The use of heavy mechanized equipment, such as a track hoe or walking excavator, could disturb the stream influence zone, disturb fish, and cause incidental mortality. There is also the potential of an accidental fuel/oil spill.

These projects may cause a short-term degradation of water quality due to sediment input and chemical contamination. Stream bank condition and habitat substrate may also be adversely affected in the short term. However, with careful project design and mitigation, these effects are expected to be of a limited extent and duration.

Direct effects to fish species resulting from these projects include reduced feeding efficiency during times of increased turbidity and the possibility of individual mortality during construction. Fish rely on sight to feed so feeding success could be hampered during those times turbidity is increased. This would be a short-term effect since turbid conditions would dissipate soon after an in-stream work phase was completed, generally within a few hours.

Any time there is digging or equipment used within the live stream channel there is a possibility fish could be killed or seriously injured by being crushed or run over by equipment. Based on previous experience with in-stream restoration projects, most fish vacate the area when equipment disturbs the stream channel.

Indirect effects are possible from increased amounts of fine sediment degrading aquatic habitat after project implementation is completed. Fine sediment sources include material mobilized from the stream channel during construction or erosion of exposed soil during and after project implementation. Potential impacts from increased amounts of fine sediments are degradation of spawning habitat. Wood placed in the stream channel would cause changes in channel hydraulics and may cause bank erosion and/or streambed scour. Although these processes occur naturally, the addition of large wood or changes in channel geometry as a result of restoration activities could cause localized areas of erosion until the channel reaches equilibrium at those sites.

The amount of sediment generated from these projects is expected to be low due to the time of year when the projects are implemented and the use of best management practices. Once exposed soil areas are re-vegetated and stabilized, erosion would be negligible. Affected areas would be localized and probably extend no further than

several hundred feet downstream from the project site. The effects would be relatively short-term; as flows in the winter increase, any sediment caused by project activity would be redistributed downstream and in effect diluted as material settles in different areas.

The probability of “take” of threatened or proposed species resulting from the implementation of these types of projects is low, but present regardless. Following in-stream work guidelines, project design criteria, using aggressive erosion control measures, and adherence to applicable Best Management Practices (BMP’s) effects would be negligible at the watershed scale.

These projects are expected to provide long-term ecological benefits, such as restoring habitat connectivity to all life histories of fish and aquatic species, restoring fish passage to historical habitats, reducing erosion and sedimentation, restoring riparian vegetation and natural processes, improving nutrient levels and improving spawning and rearing habitat for all fish species.

### **Cumulative Impacts**

The majority of the restoration projects repair human created features of the landscape. Many restoration projects result in short-term sedimentation until erosion control measures take effect. Other projects that occur in the same watersheds such as timber harvest and road construction have the potential to contribute cumulatively to the sediment load moving down streams and rivers.

Projects on federal lands would be designed to be consistent with the Aquatic Conservation Strategy of the Northwest Forest Plan and Best Management Practices. The short-term sedimentation associated with restoration projects when combined with all other sources would not likely result in harm to fish habitats or water quality for the following reasons:

- Each project would contain mitigations to minimize or eliminate sources of erosion by applying grass seed and/or mulch to areas of bare soil.
- Seasonal restrictions would be observed where appropriate to accomplish work during the dry season.

Restoration projects, timber harvest and road construction on federal land would incorporate these protections where appropriate.

### **EFFECTS DETERMINATION**

These projects are expected to provide long-term ecological benefits, such as restoring habitat connectivity to all life histories of fish and aquatic species, restoring fish passage to historical habitats, and improving spawning and rearing habitat for all fish species.

List of Proposed, Endangered, Threatened, or Sensitive (PETS) Fish and Aquatic Mollusk Species found on the Mt. Hood National Forest and addressed under this Biological Evaluation:

	Date of Listing	Suitable Habitat Present	Species Present	Effects of Proposed Action			
<b>Endangered Species Act Listing by ESU Threatened</b>				<b>No Action (A)</b>	<b>B</b>		
					<b>Shooting</b>	<b>Culvert Replacement</b>	<b>Instream</b>
<b>Lower Columbia River steelhead &amp; CH</b> ( <i>Oncorhynchus mykiss</i> )	3/98 1/06	Y	Y	NE	NE	LAA	LAA
<b>Lower Columbia River chinook &amp; CH</b> ( <i>Oncorhynchus tshawytscha</i> )	3/99 1/06	Y	Y	NE	NE	LAA	LAA
<b>Columbia River Bull Trout</b> ( <i>Salvelinus confluentus</i> )	6/98	Y	N	NE	NE	NE	NE
<b>Middle Columbia River steelhead &amp; CH</b> ( <i>Oncorhynchus mykiss</i> )	3/99 1/06	N	N	NE	NE	NE	NE
<b>Upper Willamette River chinook &amp; CH</b> ( <i>Oncorhynchus tshawytscha</i> )	3/99 1/06	Y	Y	NE	NE	LAA	LAA
<b>Lower Columbia River coho</b> ( <i>Oncorhynchus kisutch</i> )	6/05	Y	Y	NE	NE	LAA	LAA
<b>Regional Forester's Sensitive Species List</b> <b><u>Survey and Manage</u></b>							
<b>Interior Redband Trout (*)</b> ( <i>Oncorhynchus mykiss</i> spp.)	7/04	Y	N	NI	NI	NI	NI
<b>Columbia dusksnail</b> ( <i>Colligyrus</i> sp. nov.)	7/04 1/01	Y	Y	NI	NI	MIIH	MIIH
<b>Barren Juga</b> ( <i>Juga hemphilli hemphilli</i> )	01/08	Y	unk	NI	NI	MIIH	MIIH
<b>Purple-lipped Juga</b> ( <i>Juga hemphilli maupinensis</i> )	01/08	Y	unk	NI	NI	MIIH	MIIH
<b>Scott's Apatanian Caddisfly</b> ( <i>Allomyia scotti</i> )	01/08	Y	unk	NI	NI	MIIH	MIIH

**Abbreviations/ Acronyms:**

<b>Endangered Species Act Abbreviations/ Acronyms:</b>		<b>Essential Fish Habitat Abbreviations/ Acronyms:</b>	
NE	No Effect	NAA	Not Adversely Affected
NLAA	May Affect, Not Likely to Adversely Affect	AE	Adverse Effects
LAA	May Affect, Likely to Adversely Affect		
<b>Regional Forester's Sensitive Species List* and Survey and Manage + Abbreviations/ Acronyms:</b>			
Unk	Species presence unknown but suspected		
NI	No Impact		
MIIH	May impact individuals or habitat, but will not likely contribute to a trend towards Federal listing or loss of viability to the population or species		

Any adverse effects to fish species or habitat would be short-term, within the first few years. The long-term effects of these projects are beneficial.

These projects would be implemented consistent with the species and activity category-appropriate design criteria and conservation measures in Bureau of Land Management/Forest Service Fish Habitat Restoration Activities in Oregon and Washington CY2007-2012 Biological Assessment and associated Biological Opinions: NMFS BO (P/NWR/2006/06532 [BLM]), FWS BO (13420-2007-F-0055).

### **DESIGNATED CRITICAL HABITAT**

Designated critical habitat for UWR chinook, and LCR steelhead occurs within or downstream of the proposed project areas in the mainstem Clackamas River, Collawash River, Hot Springs Fork, and South Fork Clackamas River. As of this time, critical habitat for LCR coho has yet to be designated but will likely correspond with the critical habitat designation for LCR steelhead in the mainstem Clackamas and its tributaries.

Project design criteria was developed to minimize or eliminate any potential affect that project elements of the action alternatives might have on have on water quality, fisheries, and aquatic resources. The analysis of effects has determined that the probability of any potential effect to designated critical habitat would be of a short-term duration. There would be no measurable long-term effect to any habitat or baseline habitat indicators where ESA listed fish species occur. The implementation of this project would not have any long-term adverse effect to designated critical habitat. Therefore, an effects determination of **May Affect, not Likely to Adversely Affect (NLAA)** is warranted for designated critical habitat that occurs within or downstream of the project areas.

### **ESSENTIAL FISH HABITAT**

Implementation of the projects proposed would have a short-term impact but would **Not Adversely Affect** essential fish habitat for chinook or coho salmon. This activity would not jeopardize the existence of any of the species of concern or adversely modify critical habitat and would not adversely affect Essential Fish Habitat as designated under the 1996 Amendment to the Magnuson-Stevens Act.

## **3.2 Wildlife**

The 2009 Clackamas Restoration Projects Biological Evaluation is located in analysis file and is incorporated by reference and summarized below. A Programmatic Biological Assessment titled “Activities with the Potential to Disturb Northern Spotted Owls, Willamette Planning Process - FY 2008-2009” has been prepared by an interagency team.

Management Indicator Species for this portion of the Mt. Hood National Forest include northern spotted owl, pileated woodpecker, pine marten, deer, elk, salmonid smolts and legal trout (Forest Plan p. four-13).

### 3.2.1 Northern Spotted Owl (Threatened)

**Existing Condition** – None of the project areas occur within spotted owl habitat. Several of the projects occur within Late-Successional Reserves (LSR, Roaring River and Upper Clackamas – RO 207A & B; & Collawash – RO 210); within Spotted Owl Critical Habitat Units (CHU, OR-10 and 11); and within OMOCA 2, 3, & 4. The noise associated with shooting disturbs owls and may affect reproduction success.

#### **Effects**

*Effects to Habitat:* None of the proposed projects would modify any spotted owl habitat. Ground disturbance and vegetation alterations would be minimal and would not alter any of the habitat components important for spotted owls.

*Effects to Spotted Owl from Disturbance:* No action would result in continued noise from shooting. With the proposed action there would be some temporary noise from equipment. All projects would comply with the standards contained within the Biological Opinion of Activities with the Potential to Disturb Spotted Owls, Willamette Planning Province – FY 2008-2009.

There are no known or predicted owl sites that occur within this distance (disruption distance) in the Memaloose Project Area. Therefore, there would not be the potential for incidental “take” based on the noise thresholds that are accepted by the Willamette Province Level One Team and concurred with by the US Fish and Wildlife Service. All the remaining projects are considered in-stream projects and would only occur within the work timing guidelines set up by the Oregon Department of Fish and Wildlife. Implementation of these projects would occur between July 15<sup>th</sup> and August 31<sup>st</sup>, outside of the critical breeding period for owls.

Therefore, no seasonal restriction for spotted owls is needed for any of the proposed projects.

*Effects Determination:* Most of the projects would have an effects determination of “may effect, not likely to adversely affect (NLAA). The rationale for the effects determination is because a many of the projects would take place within the disturbance distance (440 yards) of a known or predicted owl site or suitable habitat and occur at sometime during the breeding period (March 1<sup>st</sup> to September 30<sup>th</sup>). The protection of known and predicted nest sites, and the low density of actively nesting spotted owls is the reason greater effects are not anticipated. Disturbance from the proposed actions are not likely to adversely affect spotted owls because although adverse effects are possible, they are not reasonably certain to occur.

### 3.2.2 Special Status Species

The following table summarizes effects to Sensitive Species from the Biological Evaluation which is incorporated by reference. The No-action Alternative would have no impact for all species.

Species	Suitable Habitat Presence	Impact of Proposed Action
Johnson’s Hairstreak	No	No Impact
Mardon Skipper	No	No Impact
Oregon Slender Salamander	No	No Impact
Larch Mountain Salamander	No	No Impact
Cope’s Giant Salamander	Yes	MII-NLFL**
Oregon Spotted Frog	Yes	MII-NLFL**
Lewis’s Woodpecker	No	No Impact
White-Headed Woodpecker	No	No Impact
Bufflehead	Yes	MII-NLFL**
Harlequin Duck	Yes	MII-NLFL**
Bald Eagle	No	MII-NLFL**
Peregrine Falcon	Yes	MII-NLFL**
Townsend’s Big-eared Bat	No	No Impact
Fringed Myotis	No	No Impact
California Wolverine	No	MII-NLFL**
Puget Oregonian	No	No Impact
Columbia Oregonian	No	No Impact
Evening Fieldslug	No	No Impact
Dalles Sideband	No	No Impact
Crater Lake Tightcoil	Yes	MII-NLFL**
Crowned Tightcoil	Yes	MII-NLFL**

\*\* “MII-NLFL” = May Impact Individuals, but not likely to Cause a Trend to Federal Listing or Loss of Viability to the Species

Effects to the species listed above include changes to habitat as well as potential harm to individuals caused by physical impacts of mechanical equipment, falling and dragging trees, and noise.

### 3.2.3 Deer and Elk Habitat (Management Indicator Species)

**Habitat Characteristics** – Roosevelt elk herds in the Clackamas drainage exhibit a close association with riparian habitat in areas of gentle terrain and low road density. Elk tend to frequent often streams or wetlands. Clearcuts in the shrub/seedling stage appear to be an important source of forage for elk. The drainage also contains black-tailed deer. Elk and deer on the District browse on a wide range of native shrubs, trees, forbs and grasses.

High road densities lead to harassment of elk herds. Harassed elk move more often than elk left alone and use of habitat decreases as road density increases. Elk within or moving through areas of high open road densities moved longer distances.

**Existing Situation** – The projects occur within both summer (SR) or winter range (WR) for deer and elk. The projects would have short-term disturbance effects during project implementation but there would be long-term benefits due to road closures in the winter range located in the Memaloose Project Area.

## **Effects**

Alternative A - No benefits to deer and elk would occur with the no-action alternative. The lower end of the Memaloose Project Area occurs within winter range (WR15) and the upper end occurs within summer range (SR 54). These areas would continue to be heavily utilized as a dispersed recreational shooting site and produce noise levels and human activity that would continue to reduce the effectiveness of the summer and winter range in the area. Deer and elk would be frequently disturbed by the gunshots and move elsewhere. Winter range is more of a limiting factor for deer and elk than summer range. The shooting occurring in the winter range is having a greater negative impact on the deer and elk than in the summer range.

Alternative B – There would be 10.5 miles of road closures that would benefit deer and elk. Reducing the noise from shooting would also reduce harassment and result in better health of animals.

The Memaloose Restoration Project includes berming, obliterating old temporary roads and user created roads, re-contouring/ decompacting, planting, and removing trash. These activities will accelerate the revegetation of these sites and potentially provide future additional forage for the deer and elk residing in the area.

The in-stream and culvert restoration projects would have no effect on the deer and elk habitat and populations. The side channel restoration projects could create a small amount of additional wetland habitat. All the side channel work occurs within winter range and would potentially create more forage for the deer and elk during the crucial winter months.

None of the culvert, in-stream, or side channel restoration projects would occur during the winter months, thus no seasonal restriction required. The lower portion of the Memaloose Project Area occurs within crucial winter range and would require a seasonal restriction prohibiting use of heavy equipment and chainsaws from December 1<sup>st</sup> to March 31<sup>st</sup>.

### 3.2.4 Other Species

Snag and down log dependent species, pine marten, pileated woodpecker, rare and uncommon species and migratory birds may be affected by the proposed action.

#### Effects

Alternative A - No effect to these species would occur with the no-action alternative for the culvert, in-stream and side channel restoration projects. Within the Memaloose area habitat is currently being degraded from the recreational shooting and dumping of garbage that is occurring at these sites. This frequent noise disturbance and human presence at these sites would continue with the No-action Alternative, degrading the habitat for these species.

Alternative B –The area affected is so small and the effects to the habitat would be so minor that no measurable changes would occur to the potential habitat for these species.

Greater solitude in the Memaloose area would benefit these species and increase the potential utilization of the habitat.

### 3.3 Botany

No rare botanical species on either the Regional Forester's Sensitive Species list (Region 6, Pacific Northwest) or on the Survey and Manage list for the Northwest Forest Plan were found at the sites visited. Nor were any federally listed or state-listed plant species found. Because all of the shooting areas are disturbed it is unlikely that any of them contain rare species, but highly likely that they contain invasive alien plant species or non-native plant species.

As part of the restoration work it is recommended that (1) the highly invasive plant species be treated and (2) the treated sites be actively restored with the planting of native vegetation in order to occupy the disturbed ground where non-native vegetation is removed and to prevent re-colonization by invasives.

In-stream projects would be monitored during implementation to insure that cold water corydalis, *Corydalis aquae-gelidae*, a sensitive aquatic plant is avoided.

### 3.4 Costs and Benefits

Each project is designed with cost effectiveness as a primary objective so that the limited funding available for restoration can be efficiently used to achieve the greatest benefit. In addition to the resource benefits described elsewhere, there are considerable economic values gained by society when wildlife and fish habitats and water quality are restored.

- Commercial and recreational fishing may be enhanced as fish runs are restored.
- Municipal water providers that filter might see cost savings as water quality improves.
- Less funding would be needed for road maintenance.

- Less funding would be needed for flood repairs when culverts are redesigned.
- Law enforcement efforts would be more effective.
- If shooting can be directed to other hardened areas such as rock quarries, there would be reduced resource damage and reduced funding needed for future restoration.

### **3.5 Wild and Scenic Rivers**

Some of the proposed projects are located within the Clackamas Wild and Scenic River Corridor. The river is also a State Scenic Waterway. A Wild and Scenic River and State Scenic Waterway Management Plan was developed in 1993. The following is a summary of a Section 7(A) Evaluation that is in the analysis file. This report documents consistency with the intent of the National Wild and Scenic Rivers Act to keep rivers free flowing and to preserve the Outstandingly Remarkable Values (ORVs) associated with the river.

#### **EFFECTS ON FREE-FLOW**

The proposed activities would improve the free flow conditions of the Clackamas Wild and Scenic River by improving channel complexity and by restoring natural river processes, such as the ability of the river to naturally reconnect with its floodplain.

#### **DIRECT EFFECTS ON ORVs AND/OR OTHER SIGNIFICANT VALUES**

The projects may have a short-term effect on recreation on and along the river. It would result in a temporary reduction of the recreation quality in the immediate area of the project during the construction period. The projects would have long-term benefits to fish.

#### **DETERMINATION**

The proposed project would not unreasonably diminish the free-flowing quality, outstandingly remarkable values, or other natural resource values for which the Clackamas River was designated. The proposed project is consistent with management goals and objectives of the WSRA and the Clackamas National Wild and Scenic River and State Scenic Waterway Environmental Assessment and Management Plan.

### **3.6 RECREATION**

The primary use in Memaloose area is dispersed recreation. Appropriate uses of the Memaloose area include dispersed camping, hunting and gathering special forest products such as mushrooms. However, target shooting is now the primary use. This is an activity that occurs dispersed across a large landscape. Many of the sites have no backstops, and shooters are unaware that bullets are reaching nearby campgrounds, a trail, a river used for fishing and rafting and a highway. Forest visitors that attempt to use road 4500 are often afraid to enter the area due to the continual sound of gun fire. Forest visitors that do drive

road 4500 are repulsed by the extent of the damage and trash in what they feel should be a natural landscape. The Forest is encouraging shooters to use rock quarries as a safer alternative to the other sites along road 4500.

The recent Wilderness bill created the Cultus Creek Protection Area directly adjacent to road 4500. Moving shooting to other areas would enhance the character of this protection area. It also created the Upper Big Bottom Protection Area that would overlap the In-stream Large Woody Debris project. It is likely that stream restorations would be consistent with Protection Area goals and objectives.

Some shooters want to continue to use the areas that would be closed with the proposed action. There is also a concern expressed by some that closing one area would just shift shooting to some other place. The goal is to educate shooters about the hazards in the project area and convince them to shoot in safer places.

### 3.7 Heritage Resources

Previous surveys and a pre-inspection were conducted for this project with no new sites discovered. This project is discussed in heritage resource report numbers 2009-060605-004 & 006. There would be no anticipated effects on heritage resources with any of the alternatives. Contracts would contain provisions for the protection of sites found during project activities. Documentation of this information has been forwarded to the State Historic Preservation Office.

## 4.0 CONSULTATION WITH OTHERS

The Forest Service consulted the following individuals, Federal, State, and local agencies, tribes and non-Forest Service persons during the development of this document:

### FEDERAL, STATE, AND LOCAL AGENCIES

U.S. Fish and Wildlife Service	National Marine Fisheries Service
Oregon Historic Preservation Office	Bonneville Power Administration
Northwest Power Planning Council	Clackamas River Water
South Fork Water Board	Oak Lodge Water Board
Mt. Scott Water District	Bureau of Land Management
Metro	Clackamas River Basin Council
City of Estacada	City of Gresham
City of Lake Oswego	City of Gladstone
City of Oregon City	City of West Linn
Clackamas County	Oregon Department of Transportation
Oregon State Parks	Oregon Department of Forestry
Oregon Department of Fish and Wildlife	Oregon Division of Lands
Oregon Marine Board	Eagle Creek National Fish Hatchery
Environmental Protection Agency	

## **TRIBES**

Confederated Tribes of Warm Springs

Confederated Tribes of Grande Ronde

### 5.0 LIST OF PREPARERS

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