

Myers Creek Salvage

**Environmental Assessment
EA: OR 128-03-23**

**Myrtlewood Field Office
Coos Bay District
Bureau of Land Management**

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Section I – Purpose of and Need for Action

Purpose and Need

The Bureau of Land Management (BLM), Coos Bay District, Myrtlewood Resource Area proposes to salvage up to 18 acres of blowdown timber located within a 40 acre BLM parcel in T.38S., R.14W., SW1/4 NE1/4, Sec.5, Willamette Meridian (See maps in Appendix A). The intention is to salvage the blowdown as expeditiously as possible by the autumn of 2004 to forego significant depreciation of market value.

The project area is south of, and adjacent to, an east-west flowing tributary of the North Fork of Myers Creek, and is located within the Cape Ferrelo Frontal 5th field watershed in Curry County. The proposed salvage is solely within a General Forest Management Area (GFMA) under the Matrix Land Use Allocation (see Maps in Appendix A).

The proposed action could yield an estimated million board feet (mmbf) of salvage timber all of which would contribute to the Coos Bay District's annual sale quantity (ASQ). Salvage could be accomplished using skyline cable yarding systems. The proposed project could include construction of 300 feet of dirt road with landing located just southwest of the 40 acre BLM parcel.

This EA is tiered to the *Final - Coos Bay District Resource Management Plan and Environmental Impact Statement* and its Record of Decision, (USDI-BLM, 1995); which is in conformance with the *Final Supplemental Environmental Impact Statement on Management of Habitat for Late-Successional and Old-Growth Forest Related Species Within the Range of the Northern Spotted Owl*, its Record of Decision, and its Standards and Guidelines (Interagency, 1994) (Northwest Forest Plan). This EA is also in conformance with the *Record of Decision and Standards and Guidelines for Amendments to the Survey and Manage, Protection Buffer, and other Mitigation Measures Standard and Guidelines* (Interagency, 2001). The RMP has been determined to be consistent with the standards and guidelines for healthy lands at the land use plan scale and associated timelines.

All of the documents and the analysis file are available for review at the Coos Bay District Office of the Bureau of Land Management, during regular business hours. Some of the above documents are available at the Coos Bay and North Bend Public Libraries, the Coos Bay District's Internet Home Page at <http://www.or.blm.gov/coosbay>, and the Oregon State Office of the Bureau of Land Management in Portland, Oregon.

Actions described in this EA are in conformance with the Aquatic Conservation Strategy (ACS) Objectives listed on page B-11 and the Standards and Guidelines for Riparian Reserves on pages C-31 to C-37 of the Northwest Forest Plan. A detailed analysis of the consistency of the action alternative with the ACS is contained in Appendix B.

The actions proposed in this EA are consistent with the National Marine Fisheries Service's March 18, 1997 Biological Opinion and Conference Opinion on activities covered in the Coos Bay District's RMP and Biological Opinion number 1-15-00-F-629 for habitat-related impacts to listed wildlife species.

Management Objectives

1. Provide for salvage harvest of timber killed or damaged by windstorms or other events such as wildfire, and insect or disease infestation consistent with management objectives for other resources.
2. Work toward meeting the Coos Bay District's Allowable Sale Quantity for the fiscal year 2004 as identified in the RMP and the Northwest Forest Plan.
3. Provide cost effective management that would enable implementation of these management objectives while providing collateral economic benefits to society.
4. Comply with the Standards and Guidelines in order to ensure consistency with Aquatic Conservation Strategy objectives at the site level.

Scoping

The primary scoping process consisted of an interdisciplinary team (IDT) who defined the concerns and alternatives to be examined in the EA. Additional specialist information, and analysis documents used by the interdisciplinary team (IDT) to analyze impacts and alternatives are contained in the analysis file, hereby incorporated by reference.

Actions That May Result From This Analysis

Based on the analysis provided in this environmental assessment, the BLM Field Manager for the Myrtlewood Field Office must decide whether to proceed with the proposed salvage project as described in Chapter 2.

The Field Manager must determine if the selected alternative would or would not be a major Federal action significantly affecting the quality of the human environment. If the Manager determines it would not significantly affect the quality of the human environment, then the manager can prepare and sign a Finding of No Significant Impact (FONSI).

If the Manager determines that the selected alternative would significantly affect the quality of the human environment, then the projects must either be dropped, modified or an Environmental Impact Statement (EIS) and a Record of Decision (ROD) must be prepared and signed before the Myers Creek Salvage project could proceed.

Section II – Alternatives Including the Proposed Action

This section describes the alternatives, and summarizes the environmental consequences of the action alternative.

No Action Alternative

Under this alternative salvage harvest in the project area would not occur, and the blowdown timber would remain on the ground continuing to decompose, while continuing to benefit soil, wildlife and botany resources. The project area will likely regenerate predominantly with brush and hardwoods, and the large accumulations of dead woody debris is likely to create a potential fire hazard at least in the short term of 10-15 years. The merchantable timber not salvaged would not contribute to the District's ASQ, and the economic benefit to the community associated with the salvage harvest would be foregone. The 300 foot dirt spur to access the salvage area would not be constructed.

Proposed Action

This alternative proposes to salvage harvest up to a million board feet of blowdown timber from up to 18 acres of GFMA land, and is located south of, and adjacent to, an east-west flowing tributary of North Fork of Myers Creek within a 40 acre BLM parcel. The harvest would be accomplished using a skyline cable yarding system from two landings located on private land just south of the 40 acre parcel (see maps in Appendix A). The landing adjacent to the SE corner would be accessed by an existing private road. A constructed landing adjacent to the SW corner would be accessed by constructing a ridgetop 300 foot dirt spur on private land that would extend an existing private road. All merchantable blowdown outside riparian reserves could be removed after meeting the Course Woody Debris (CWD) requirements outlined in the *Standard and Guidelines of the Record of Decision for the Northwest Forest Plan*. All standing trees and existing snags would be reserved from cutting except to facilitate cable yarding or to eliminate a safety hazard.

Project Design Features

The best management practices described in the RMP appendix D describe many of the design features for the Proposed Action and are incorporated into their design. Additional design features and some highlighted best management practices are described below. Design features include timber sale design, and prescribed activities to be accomplished by the BLM or timber sale purchaser.

Harvest Methods

- Yarding shall be completed with a skyline-cable yarding system, including a drop-line carriage, capable of one-end log suspension. A minimum of one-end suspension is required for yarding of all logs.
- Lift trees and intermediate supports would be required where needed to help attain one-end suspension.

- A minimal number of trees within the yarding corridors could be felled to facilitate operating a cable yarding system.
- Trees will be limbed, topped and cut into log lengths prior to yarding and the resulting slash will be left on site to provide for nutrient recycling (except as necessitated by site preparation).
- A 300 foot temporary dirt spur would be constructed on South Coast Lumber Co. (SCLC) land for logging the SW portion. An existing landing on South Coast would be utilized to log the area east of the SW portion. The spur would be decommissioned (blocked and put in erosion-resistant condition) after use with the approval of South Coast.
- Road construction, tree cutting and log yarding, and hauling of yarded logs would be allowed only between June 1 and October 15 unless dry conditions extend beyond this period.

Wildlife & Botany

- Follow all mandatory Project Design Criteria stipulated in the U.S. Fish & Wildlife Service Biological Opinion current at the time the project proceeds.
- A minimum of 120 lineal feet per acre of Class 1 & 2 down logs will be left on site (sizes representative of logs available, $\geq 16''$ dbh at large end and $\geq 16'$ long, bark intact, well distributed in unit).
- Cutting of live standing trees will not exceed what is necessary to facilitate cable yarding or to eliminate a safety hazard. Trees greater than 40'' dbh will not be cut, as safety allows.
- Standing live trees will be protected to the greatest extent possible.
- Snags will not be removed (as safety permits) and will be protected from damage.
- Leave down wood in a wide range of size and decay classes to assist the development of bryophyte species richness in the ensuing young conifer plantation.

Noxious Weed Control

- All tracked or wheeled vehicles will be washed, including belly pans, prior to entering the project area.
- All silvicultural treatments will include cutting of all noxious weeds if found in treatment areas. All locations would be reported to the BLM if found.
- BLM controlled roads and lands would be monitored for noxious weeds for potential spread from private lands and treated when found.
- Native plants should be used in reseeding efforts when available to increase the competition with invasive plant species.

Fisheries

- The Riparian Reserve in this location is 180 feet (height of one site potential tree).
- Yarding through riparian reserves will be avoided unless there is no feasible alternative. Full suspension will be used over stream channels, and no salvage will be removed from the riparian reserves.

Silviculture and Site Prep

- Site preparation and replanting of the salvage harvest area with conifers would be within one growing season (the Analysis File contains a silvicultural prescription and recommendations for site preparation).
- Tree planting would be to restock BLM salvage harvest areas and for any logging damage to residual plantations of SCLC or from use of their lands. Planting requirements on SCLC lands will be as per use agreement between SCLC and BLM.
- All harvest and post-harvest activities will be in compliance with applicable Oregon State Fire Regulations and 92-14 Prescribed Fire Guidelines. Disposal of slash through various burning methods would be conducted under the direct oversight of Bureau of Land Management personnel and will be in compliance with the State of Oregon Smoke Management Guidelines.
- Burn piles, either hand or machine will be located away from existing snags and down wood to prevent fire charring. Where tree retention is located piles will be placed at a distance from leave trees to minimize scorching when burning.
- Hand piling would entail piling of logging residue and slashed undesired brush species material from ½ inch to 4 inches. Hand piled brush would be covered with black plastic and burned in the following late fall/early winter when fire danger is low. Piles could be distributed throughout the stand to provide the best opportunity for achieving desired micro-site planting and spacing of planted understory trees.
- Post harvest treatments along roads and landings for hazard reduction may include machine and/or hand piling of slashed vegetation, logging residue, and landing pullback. Machine pile all material yarded to landing, and all material pushed off the landing during the operation. Piles would be covered with black plastic in a small area (10 x 10) on each side of the pile to allow for dry ignition during the rainy season and when fire danger is low.
- Other site preparation activities could include slashing, swamper burning and chainsaw scalping.

Other

- Activity resulting from the proposed action would be subject to State of Oregon Administrative Rule No. 340-108, *Oil and Hazardous Materials Spills and Releases*, which specifies the reporting requirements, cleanup standards and liability that attaches to a spill or release or threatened spill or release involving oil or hazardous substances. In addition, the Coos Bay District Hazardous Materials Contingency Plan and Spill Plan for Riparian Operations apply when applicable to operations where a release threatens to reach surface waters or is in excess of reportable quantities.
- Ground disturbance should be avoided or minimized to the extent practical on the ridge-top meadow, which is located between the SW and SE corner salvage areas.
- Site treatment and harvest methods should be conducted to minimize soil and litter disturbance.

SECTION III – ENVIRONMENTAL CONSEQUENCES

This section is organized by resource and describes the expected impacts to the resource as they relate to the two alternatives. The Baseline Condition (affected environment) is included in the No Action Alternative, and describes the environmental components that could be affected by the alternatives if they are implemented.

ENVIRONMENTAL IMPACTS TO CRITICAL ELEMENTS OF THE HUMAN ENVIRONMENT

Examination has shown the following critical elements of the human environment to be *unaffected* by either of the two alternatives.

- Air Quality
- Areas of Critical Environmental Concern
- Prime or Unique Farmlands
- Wild & Scenic Rivers
- Wilderness Values

TIMBER STAND ENVIRONMENT

No Action

Baseline Condition:

The proposed salvage and surrounding standing timber is mixed Western hemlock and Douglas fir. Tree diameters measured at breast height (dbh) range from 20 to 48 inches. 1938 and 1939 were large fire event years for the Oregon South Coast, and fire scar is evident on the trees ranging from 90 to 105 years old. The trees in the younger post-fire component of the stand measure 20 to 28 inch dbh and are less than 60 years old. The hardwood component consists of scattered tanoak and alder. An increased risk to fire spread and intensity exists within the blowdown areas due to the heavy fuel concentrations.

South Coast Lumber Co. is the landowner to the immediate south. In the winter of 2002 – 2003, they clearcut logged this area to the south exposing the BLM timber stand to direct coastal winds. The Pacific Ocean is visible from the site and is within 1 ½ air miles. Exposure to winter time storm events that channel up the Myers Creek drainage resulted in approximately eight acres of timber blown down (as of February 2004). Presently it is estimated that there is approximately 350 thousand board feet (mbf) on the ground.

Direct/Indirect and Cumulative Effects:

Under the No-Action Alternative for the project area there would: be no mortality salvage logging of blowdown in order to forego significant market value depreciation of the timber as a result of decay; be no subsequent silvicultural site preparation and replanting of conifers for the foreseeable future; be no contribution to the Coos Bay District's annual sale quantity (ASQ); be no post-harvest reduction in fuel concentrations that could decrease fire risk. The blowdown could become a host for bark beetles, and an infestation could cause mortality to the surrounding timber. With increased light and exposed soils, hardwood tree species, rhododendron, and

huckleberry could regenerate the area. There would be no temporary road construction, use of existing landing, or yarding across South Coast Lumber land.

Proposed Action

Direct/Indirect and Cumulative Effects:

The Proposed action would remove the blowdown by the autumn of 2004 to help forego significant depreciation of market value. For example, less than 15 percent of the gross volume would thus be lost to decay of the sapwood. The sale volume would be counted toward the Coos Bay District's ASQ. The number of down logs exceeding the threshold for host bark beetle infestation would be removed, thus reducing the risk to the surrounding timber. The threshold appears to be at least four down Douglas-fir greater than 10 inch in diameter remaining per acre. Site preparation and replanting with conifers could return the project area to a productive timber site and eventually contribute to the local economies. Salvage logging would greatly reduce the fuel concentrations and continuity within the blowdown. Site preparation could include hand piling and burning. South Coast Lumber Company's land and infrastructure impacted by this project would be restored to an acceptable condition according to their terms and conditions of use.

SOIL RESOURCES

No Action

Baseline Condition:

The project area is divided into two distinct geology and soil map units.

The **southwest corner** has soils of the Whaleshead-Reedsport-Millicoma complex on slopes of 30-60%, and they are derived primarily from the Cape Sebastian Sandstone geologic unit. The soils are moderately deep to very deep, are well drained, and are found on ridges and side slopes. They are gravelly to very gravelly loams, are 20 to 60 inches in depth, and have a moderate to moderately slow permeability. Limitations to management are steep slopes, moderate to severe erosion hazard, earthflow and debris slide hazard, windthrow and severe plant competition.

The **southeast corner** has soils of the Orford-McDuff complex on slopes of 15-30%, and are derived from the Otter Point Formation which consists of a diverse assemblage of highly sheared sedimentary rock with isolated pods of harder more resistant bedrock of volcanics, chert and blueschist. The soils are moderately deep to very deep, are well drained, and are found on hill slopes, benches, summits, shoulder slopes, and backslopes of mountains. They are gravelly silt loams and silty clay loams, are 20 to 60 inches in depth, and have a moderately slow permeability. The limitations to management are the susceptibility of the surface layer to compaction, slope erosion, earthflow hazard, and severe plant competition.

For the above soils to express their limitations and hazards, hill slopes need to exceed 45%, and the soil must be exposed by removing most to all of the vegetative cover. The slopes in the salvage and disturbance area do not exceed this threshold. Soil exposure, as a result of project activity, would be localized and limited to narrow yarding corridors and residual burn piles after

site preparation. Timber Productivity Capability Classification (TPCC), with the appropriate management directives, has been applied to this project.

All soil map unit data is available solely from the National Resource Conservation Service (NRCS) in an online form. No published soil survey has been compiled for this county that covers the analysis area. The basis for soil resource analysis in this document is the information provided by the NRCS, and as preliminary information may be subject to change in a final published document.

Direct and Indirect Effects:

This alternative would have minimal impact on existing soil conditions in the area of blow down. Presently there are large concentrations of downed timber in the project area. This large quantity of wood represents mostly immobilized nutrients and undecomposed organic matter, which would be released and incorporated gradually over time into the soil by biological and physical decomposition. The large amount of timber on the forest floor will likely increase the numbers of biological decomposers. There would be the probable effect of increasing surface soil acidity due to the release of organic acids during decomposition, and the microbial population of acid forest soils is commonly dominated by fungi (Pritchett, 1979). This process, while transitory, would continue for some time, until the further decomposition of organic matter results in the increasing mineralization of nutrient bases which act to reduce soil acidity.

Cumulative Effects:

Over time the multiple soil processes of decomposition, leaching of nutrients, nutrient input from the environment, and increasing nutrient uptake by growing biomass would result in a relative state of equilibrium of the surface soil layer where nutrient loss is balanced by storage and accumulation.

Proposed Action

Direct and Indirect Effects:

Compaction – Some compaction of the surface soil is expected from the yarding of logs by the skyline operation. Fredriksen and Harr (1979) cite a study from the H. J. Andrews Experimental Forest that shows a compaction of 3.4% from skyline harvesting. This is well under the Coos Bay District's RMP guideline of less than 12%. It is also expected that soil compaction resulting from the cable yarding of the salvage would be recovered in less than 15 years (Worrell and Hampson, 1997).

Surface Erosion and Sediment Delivery – Some downhill transport of fine sediment with surface flow is likely to occur as a result bare soil exposure created by cable yarding and post-harvest site preparation. This exposure will be localized within narrow yarding corridors and perimeters of residual burn piles, and is expected to remain less than 20% of the salvage area. Sediment transport distances outside disturbance areas are expected to be minimal and have a negligible impact on existing soil conditions. This is due to extensive vegetation and ground slash that would surround disturbance areas and the moderate to high soil infiltration rates (0.6-6.0 in/hr). The dirt spur to be constructed has a ridgetop location, and will be designed to route surface flow onto adjacent highly permeable vegetated ground. Any sediment-laden surface water should quickly infiltrate into the forest soils.

Soil Decomposition, Nutrient Recycling and Soil Productivity – Large quantities of organic matter and its incorporated nutrients, especially nitrogen, would be removed from the site after salvage logging and pile burning. The same decomposition and recycling would take place in the post-harvest period as in the no action alternative, but with smaller amounts of organic matter and nutrients. These impacts are expected however, and they would not be significant nor long lasting. Harvesting followed by slash burning generally results in a flush of nutrients removed from the site in solution, but mostly in small amounts persisting for a short time (Satterlund and Adams, 1992). Satterlund and Adams (1992) further observe that when revegetation is not inhibited most disturbed sites rapidly revert to a condition of nutrient accumulation until the site gradually comes to a steady state where inputs and exports of nutrients come into balance. The soils of the project area all have generally high site indices, organic content, and nitrogen bases with deep soils and wet moisture regimes. These qualities make them high in resiliency and enable them to rebound or recover from a stressed condition and maintain their productivity over time (Meurisse, 1999). The Coos Bay District Proposed RMP EIS, vol.1 (1994) states that if prescriptions of low-to-moderate burn intensities and Best Management Practices (BMPs) are implemented as mandated in the RMP, soil organic matter and closely related long-term site productivity should be acceptably maintained.

Cumulative Effects:

The incremental impacts of the proposed action when coupled with other past, present or reasonably foreseeable actions taken by either public or private groups would be difficult to determine. The cumulative effect of using the District RMP BMPs to maintain soil productivity and reduce soil erosion would be very slight within the Myers Creek subwatershed if other land managers are not employing similar practices due to the minute amount of BLM land in the subwatershed. As in the no action alternative, over time the multiple soil processes of decomposition, leaching of nutrients, nutrient input from the environment, and increasing nutrient uptake by growing biomass would result in a relative state of equilibrium in the surface soil layer where nutrient loss is balanced by storage and accumulation.

WILDLIFE & ASSOCIATED HABITATS

No Action

Baseline Condition:

A complete list of wildlife species known or suspected to occur on the Coos Bay BLM District can be found in Appendix T of the *Final - Coos Bay District Resource Management Plan and Environmental Impact Statement* (USDI-BLM, 1995). A revised list of special status animal species known or suspected to occur in the Coos Bay District is contained in the analysis file (Revised Table C-3).

Special Status Species This stand was surveyed for marbled murrelets in 2003 with no murrelets detected. Northern spotted owl presence has been documented. High quality habitat exists for Northern goshawks. The project site is on the north edge of the California slender salamander's

range and possesses suitable habitat. Possible red tree vole nests have been identified near the project area but activity status has not been established.

Other Wildlife and Wildlife Habitats Down logs are above natural levels within the project area and at natural levels in the stand as a whole. Adjacent private lands are below natural levels of down logs. Wide and well-used game trails in the stand indicate heavy use by deer and elk. A natural meadow (approximately 2 acres) occurs on the ridge on the south edge of the BLM land and on private lands to the south. There was sign of deer and elk use in and under the trees on the meadow's edge. The surrounding private lands were harvested in 2002 or 2003.

Effects to Special Status Species (Including T&E and S&M)

Direct Effects: California slender salamanders would benefit from current down wood.

Indirect Effects: There would be no indirect effects to special status species.

Effects to Other Wildlife and Wildlife Habitats

Direct Effects: The down logs present would provide current and future habitat for species associated with down wood.

Indirect Effects: Road density would not increase in the area. Disturbance to elk and deer would remain at current levels.

Proposed Action

Effects to Special Status Species (Including T&E and S&M)

Direct Effects: California slender salamanders would lose a large amount of down wood habitat.

Indirect Effects: The removal of and damage to live trees would decrease red tree vole habitat.

Effects to Other Wildlife and Wildlife Habitats

Direct Effects: The removal of down logs would displace animals currently using this habitat. Some snag and live tree removal could occur to allow for the safe removal of logs. The addition of 300 feet of road would slightly increase road densities in the watershed. This would be a temporary increase if the road is decommissioned following harvest. Precise density figures are not available because no watershed analysis was performed in this area, and there is a large amount of private roads within the watershed. Hunting pressure on and disturbance to elk and deer in the project area would increase if the spur road is not decommissioned.

Indirect Effects: Wildlife would be deprived of future use of the down logs. The disturbance from logging activities would increase the potential for future windthrow. The removal of snags would decrease habitat for bats and for primary and secondary cavity-nesting birds.

Cumulative Effects: The loss of the down logs would be an irretrievable loss of wildlife habitat. There would be a very small increase in road densities in the watershed if the spur road is not decommissioned. There would be no cumulative impacts on any wildlife species. Neither alternative would contribute to the need to list any special status species through direct, indirect, or cumulative effects.

HYDROLOGICAL CONDITIONS

No Action

Baseline Condition:

The proposed action would salvage blowdown timber from an isolated 40 acre parcel of public land entirely within the Myers Creek subwatershed (REO 6th Field 171003120601). Myers Creek is part of the greater watershed, Cape Ferrelo Frontal (REO 5th Field 1710031206). Myers Creek drains approximately 3,580 acres directly into the Pacific Ocean.

Myers Creek experiences the typical characteristics of the southern Oregon Coast Range. Precipitation more often arrives in the form of rain and drives the interaction between the amount, intensity, and distribution of rainfall events corresponding to annual yield, peak flows, low flows, and groundwater levels of the watershed. The general flow regime of the analysis area is conducive to rapid runoff due to a high drainage density, low bedrock permeability, coarse textured and shallow soils combining with high rainfalls, and steep topography. Correspondingly, stream channels in the project area are generally headwater, steep cascading and step-pool channels confined by hill slopes, which may experience periods of extremely low flows or dry completely.

Direct and Indirect Effects:

The proposed salvage of blowdown timber, and the road construction described in the proposed action would not take place. This alternative would not generate any discernable increases in water yield, sediment delivery, or changes in riparian conditions. This alternative would retain the stream in its present condition.

Proposed Action

Direct and Indirect Effects:

Stream Flow - *Annual Yield, Peak Flows, & Low Flows* - At a much larger scale than the project area, blowdown would have the potential to affect annual water yield. The loss and subsequent removal of forest vegetation could make more water available for stream flow and/or additional groundwater storage. However, since the proposed salvage involves a minute area, about eight out of 3,500 acres, no measurable increase in water yield is expected as a result of the proposed project.

Water Quality - *Stream Temperature* - The proposed action would take place entirely outside of a Riparian Reserve. Thus, the proposed salvage would have no discernable effect on stream temperature.

Sediment - Some short-term soil displacement and pathways for sediment delivery may occur as a result of localized soil disturbance from felling, yarding, and ground based equipment operations. BLM Riparian Reserve areas are intended to function as stream protection buffers to avoid impacts to aquatic resources from harvest activities. These buffers would assist in maintaining riparian integrity that includes vegetation composition, shading, and bank stability. The Riparian Reserve would also provide an adequate filter strip since forest soils in the Pacific Northwest have very high infiltration capacities and are not effective in transporting sediment by rain splash or sheet erosion (Dietrich et. al. 1982).

Channel Condition and Large Wood - Providing large wood to streams is an important component in meeting Aquatic Conservation Strategy objectives. Large wood contributed to the channel from Riparian Reserves would provide several benefits to channel function and water quality. Removing blowdown from the upland areas should not measurably decrease the amount of large wood available to the stream due to distance of the blowdown away from the stream, and amount of large timber that would remain within Riparian Reserve.

New Road Construction - Approximately 300 feet of new road would be constructed to access the proposed salvage area. The new construction would be entirely out of the Riparian Reserves on private lands as an extension of an existing road. This ridge top portion of road has a low potential for impacting streams. The road will be designed to quickly route surface flow across the road prism, and any potential sediment-laden surface water should quickly infiltrate into forest soils. The road should not increase sediment delivery to stream channels and would have little potential to affect water quality.

Haul Routes - Most of the proposed haul routes are paved or gravel surfaced. Sediment delivery to streams from gravel surface roads would be minimized or eliminated through dry season hauling.

Cumulative Effects: (No Action and Proposed Action)

There are only 80 acres of public land in the entire Meyers Creek drainage. Information for the assessment of Cumulative Effects from private management is limited. However, based on scale, this action or non-action alternative will have no measurable cumulative effects on landscape hydrologic processes, beyond the range of natural variability.

FISHERIES AND AQUATIC HABITAT

1.1. No Action

Baseline Condition:

Very little is known about the Myers Creek subwatershed, which traverses the 40 acre parcel in which the proposed salvage sale resides. There are no current watershed analyses that encompass Myers Creek specifically, and due to the limited federal ownership there is very little data available for the subwatershed.

A tributary of the North Fork of Myers Creek (NFMC) flows through the 40 acre parcel from east to west. There are two first order intermittent tributaries that were identified within the proposed salvage sale area which enter the main tributary from the south.

NFMC supports populations of winter steelhead, resident cutthroat trout, and possibly migratory cutthroat trout. A search of databases revealed no record of Oregon Coast coho salmon existing within the NFMC. The uppermost distribution of steelhead and cutthroat is within section 6, approximately one mile from the west BLM property boundary of the 40 acre parcel.

The NFMC is approximately three miles in length, and all but the 40 acre BLM parcel is privately owned and heavily managed for timber production along almost its entire length. Inspections of aerial photography reveal that there is a 0.5 mile section of NFMC that is mostly unshaded, and that the riparian is abbreviated and/or lacking large wood recruitment potential for

nearly the entire length of the creek and on a vast majority of the tributaries. It can therefore be presumed that the existing condition of the aquatic habitat within the stream channel is characterized by a lack of large wood; habitat complexity and suitable spawning gravel would also be deficient. The lower portion of the creek is paralleled by a road, and there are several road crossings, which present opportunities for sediment delivery to the stream.

Direct/Indirect and Cumulative Effects:

Under no action, the timber salvage would not be conducted. The blowdown would remain on the ground, and no spur would be constructed to access the SW corner of the parcel. There would be no direct, indirect or cumulative effects to the fisheries resource under this alternative.

Proposed Action

Direct/Indirect and Cumulative Effects:

Yarding of Salvage - Under the proposed action, the trees that are down on the ground would be yarded up the hill during the dry season. The nearest stream channel to any salvage is the furthest east first order intermittent tributary. One blowdown tree comes to within approximately 180 feet of the terminus of this channel, therefore, it would be considered outside of the 180 foot riparian reserve. The proposed action consists of yarding this salvage up the hill and away from the channel. There are several standing green trees on the slope between the salvage and the beginning of the stream channel. Therefore, it is very unlikely that any of the fallen trees will reach the channel and provide large wood to the stream. Since it is unlikely that the blowdown will reach the stream channel, yarding all the salvage at least 180 feet upslope and away from the channel during dry weather will have no effect to aquatics.

Road Construction and Hauling - A 300 foot spur road would be constructed to access the SW corner of the parcel. The spur will be on a ridge and connect to an existing unimproved road. Hauling of the salvage in the SW corner will be conducted from the proposed spur to a private road, which is mostly on a ridgetop and has no stream crossings. The planned haul route then connects to the 38-14-7.0 road and would travel in a northeasterly direction across South Coast Lumber land to the junction with the 37-14-31.0 road and the planned haul route for the salvage in the SE corner. The salvage in the SE corner will be removed from the east on road number 37-14-31.0 and hauled to the north and west to US Highway 101, for a total of 4.74 miles, one mile of which is on a hard surfaced road and the rest on gravel. This route will consist of 14 stream crossings on gravel roads and three stream crossings on the portion of the hard surfaced road. The streams are first order tributaries to the NFMC and to Egans Creek, which is west of the NFMC drainage. Neither drainage is known to have populations of coho. Construction of the spur and hauling will be conducted during the dry season. No portion of the haul, construction, or yarding related to this project will affect Oregon Coast coho.

Threatened and Endangered Species, and ESA Consultation - There are no listed fish within the drainage where the proposed salvage and related activities are to occur.

Essential Fish Habitat - The analysis area does not contain any Essential Fish Habitat.

HAZARDOUS MATERIALS / SOLID WASTE

No Action

Baseline Condition:

Historical records and current site knowledge indicates no existing recognized environmental conditions for either hazardous substances or solid wastes on this portion of federally-managed lands. Adjoining private lands have not been assessed for these concerns to date.

Direct/Indirect and Cumulative Effects:

There are no discernible effects on Hazardous Materials and Solid Wastes from this alternative.

Proposed Action

Direct Effects:

There are no direct effects anticipated from the Proposed Action.

Indirect Effects:

The use of heavy equipment in the performance of the work identified under this alternative creates a risk to the environment as a result of any release of petroleum product, particularly near or leading to surface waters. Any such release is governed under provisions of State of Oregon Administrative Rule No. OAR 340-108. A Spill Control and Countermeasures Plan (SPCC) conforming to the standards of OAR 340-108 is required. The SPCC should also correlate to the Coos Bay District Hazardous Materials Contingency Plan and the District Spill Plan for Riparian Operations (if applicable). Included in the SPCC and District plans is the requirement for an oil Spill Kit to be onsite during operations. The contents and use of the Spill Kit are to be detailed in any contract provisions resulting from this alternative. Notification and response processes are also detailed in the District plans.

Cumulative Effects:

In the event of a release of hazardous substances or petroleum product, migration of the contaminant to surface waters would create a variety of problems, dependent upon amount and type. Most probable source would be the rupture of hydraulic fluid lines or poor maintenance of equipment, resulting in the leak or discharge of oil. The type of soils impacted would dictate how much of the contaminant could be contained, removed, or allowed to dissipate. A spill confined to dry land would be contained and cleaned up to appropriate levels identified under Oregon State Soil Clean-up Matrix guidelines.

Under Oregon State Law, a Reportable Quantity (RQ) of petroleum product to water is defined as: "...any quantity of oil that would produce a visible oily slick, oily solids, or coat aquatic life, habitat or property with oil..." (*Reference: Oregon Administrative Rule No. 340-108-010, Reportable Quantities*). A release to dry land, with no potential for migration to water, is defined as 42 US gallons or greater. Either release would generate a series of reporting, response and monitoring requirements by Federal and State authorities.

BOTANY

No Action

Baseline Condition:

The area proposed to be salvaged is part of a single-storied conifer stand dominated by Douglas-fir (*Pseudotsuga menziesii*). There are two distinct age classes in the overstory: the older, larger diameter trees that are 90 to 105 years old and the smaller diameter, younger trees that are around 60 years old. Western hemlock (*Tsuga heterophylla*) and grand fir (*Abies grandis*) are also present in the overstory, but in limited quantity. In the stand adjacent to and surrounding the blowdown, competitive exclusion and canopy closure have left the understory quite open with only a few tree and shrub species. These understory tree species include a couple of patches of red alder (*Alnus rubra*), and a few tanoak (*Lithocarpus densiflorus*), western hemlock, and myrtlewood (*Umbellularia californica*). The understory shrub and herb layer in the adjacent stand is dominated by swordfern (*Polystichum munitum*) which forms a dense ground cover and limits shrub and herb diversity. Vascular plant diversity is greater in the blowdown area as early seral plant species have begun to recolonize the open, disturbed ground created by the wind throw event. Overall lichen and bryophyte diversity is very low, both in the blowdown patch and in the adjacent forest.

Direct and Indirect Effects:

A botanical survey was conducted for both vascular and non-vascular (lichen and bryophyte) plant species and no Threatened and Endangered (T & E), special status species (Bureau Sensitive and Bureau Assessment species), or Survey and Manage (S & M) plant species were found in the blowdown area or in the adjacent forested stand. Thus, there would be no impacts to T & E, special status, or S & M plant species.

Vascular and nonvascular plant communities would remain largely unaffected with the primary benefit being an increase in the down woody material available for log-dwelling bryophyte species.

Cumulative Effects:

There would be no cumulative impacts to T & E, special status species, or S & M species as a result of leaving the blowdown on the ground.

Proposed Action

Direct and Indirect Effects:

The removal of blow down trees and some standing trees would result in a change in understory vascular plant diversity. However, permanent-plot studies of early succession Douglas-fir forests suggest that changes in understory vascular plant diversity are fairly short-lived following logging and slash burning (Halpern and Spies 1995). The disturbance created by the blow down event has already radically altered site conditions, and early seral plant succession has begun in much of the blow down area anyhow.

The blowdown event has also impacted the non-vascular plant community. Early seral lichen and bryophyte species are beginning to colonize the blow down area. Non-vascular plant surveys

indicate that diversity is fairly low in the adjacent stand. Removing some standing trees in order to facilitate removing blow down would have minimal effect on nonvascular plant diversity in this adjacent forested stand.

A botanical survey was conducted for both vascular and non-vascular (lichen and bryophyte) plant species and no T & E, special status species, or S & M plant species were found in the blowdown area or in the adjacent forested stand. Thus, there would be no impacts to T & E, special status, or S & M plant species.

Cumulative:

There would be no cumulative impacts to T & E, special status species, or S & M species as a result of salvage logging the blowdown on the ground.

PORT-ORFORD-CEDAR

No Action/Proposed Action

Baseline condition:

No Port Orford Cedar (POC) was seen in the proposed salvage area.

Direct/Indirect and Cumulative Effects:

There will be no effect on POC from the No Action or Action alternative.

NOXIOUS WEEDS

No Action

Baseline Condition:

The noxious weed population is light with increasing populations of pampas grass (*Cortaderia* spp.) occurring in the adjacent areas.

Direct and Indirect Effects:

The blow down has caused disturbed and exposed soils within the project area. It is not likely that noxious weed populations will be initiated within this area. However, the site remains vulnerable for new populations of invasive species.

Cumulative Effects:

There should be no significant increase in noxious weeds as a result of the blow down timber.

Proposed Action

Direct and Indirect Effects:

Any surface disturbance will increase the probability of new populations of invasive species (including pampas grass) to occur. The most significant threat will be equipment and personnel transporting seeds into the site.

Cumulative Effects:

There is a strong likelihood that noxious weed introductions will result with increased mechanical disturbance of the area.

CULTURAL RESOURCES/ENVIRONMENTAL JUSTICE

No Action

Baseline Condition:

Preliminary Review: Class I inventory (review of project documentation and records check) shows no known cultural resources in the immediate vicinity of these blowdown areas. There is a ridge-top meadow which barely extends into this parcel along the southern boundary. This meadow is a high-probability area for cultural resources.

Field Review: The vast majority of this unit is steeply-sloped, with little or no probability of containing cultural material. However, in the middle of the southern boundary of the unit is a long, thin ridge-top meadow, approximately 215 feet long and no more than 30 feet wide in most places. Only one side of the meadow (about 10-15 feet wide) is on BLM property. I conducted a Class III inventory (close-spaced transects) of the entire meadow area.

Environmental Justice

The proposed area of activity is not known to be used by groups protected by environmental justice legislation. These groups include Native Americans, and minority (or low-income) populations. The Bureau of Land Management concludes that no disproportionately high or adverse human health or environmental effects would occur to the protected groups because of the proposed action. Therefore, Environmental Justice would not be further analyzed in this document.

Direct/Indirect and Cumulative Effects:

Cultural resources would be unaffected by the No Action Alternative as no ground disturbing activity would take place.

Proposed Action

Direct/Indirect and Cumulative Effects:

Cultural materials were not located during the Class III survey of the meadow area. Therefore, it is not expected that cultural resources will occur in the vicinity of the salvage units. If potential cultural resources are encountered during the course of this project, however, all work in the vicinity shall stop and the District Archeologist must be notified at once.

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