U.S. Department of Interior
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Roseburg District, Oregon

Dog Bone Commercial Thinning and Density Management

Decision Document

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U.S. Department of Interior
Bureau of Land Management
Roseburg BLM District, Oregon

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SECTION 1 – THE DECISION

Introduction

Dog Bone is a commercial thinning and Density Management project identified in the Upper Umpqua Watershed Plan (EA # OR-104-02-09) and its subsequent Decision Record (October 8, 2003). This decision is consistent with the Roseburg District Record of Decision and Resource Management Plan (ROD/RMP) adopted in June 1995 and the Upper Umpqua Watershed Plan. The implementation of this decision will meet the following objectives from the Upper Umpqua Watershed Plan (pg. 2):

- For mid-seral forests on BLM lands designated for wildlife and fish needs, accelerate stand diversity and development of late-successional characteristics such as large crown ratios, larger lateral branches, multiple canopy layers, and a greater number of larger conifers while maintaining a healthy ecosystem.

- For mid-seral forests on BLM lands designated for commercial harvest needs (General Forest Management Areas, Connectivity/Diversity Block), maintain healthy growth rates and contribute timber for the local and regional economy while protecting certain forest components for wildlife.

Decision

It is my decision to authorize implementation of the Dog Bone Commercial Thinning and Density Management timber sale in Sections 17, 18, and 19, T. 26 S., R. 07 W., Willamette Meridian following the project design features (PDFs) established in the Upper Umpqua Watershed Plan as adjusted in the Decision Record. This timber sale is located within the General Forest Management Area (GFMA) (101 acres), and Riparian Reserve (32 acres) land-use allocations. The stands that will be treated are second-growth forest that range in age from approximately 46 to 52 years old. Dog Bone will provide approximately 1.82 MMBF of merchantable timber available for auction. This decision is subject to administrative remedy under 43 CFR § 5003.2 and 5003.3. The action authorized by this decision is described below.

Timber Harvest

The unit consists of approximately 129 acres of mid-seral forest, 46-52 years old, and will have commercial thinning and density management treatments applied. The average size tree that will be harvested is approximately 11.0 inches diameter breast height (DBH). Four (4) acres will be cleared or brushed for road and spur right-of-ways. Therefore, the Dog Bone project is a total of 133 acres. Additionally, one (1) acre of right-of-ways on privately owned lands will be cleared to access the harvest areas.

Treatment Prescription

Commercial thinning and density management will be used to reduce the number of trees in stands dominated by Douglas-fir that are even-aged. Trees will primarily be removed from the suppressed and intermediate canopy classes, although some co-dominant and dominant trees could be removed where necessary to meet specific density objectives. The harvest unit is marked to retain approximately 70-120 square feet of basal area per acre (low and high residual density).

The prescription for tree marking was designed to create variable spacing between the remaining trees. This was accomplished by occasionally leaving clumps of trees, clearing around large limbed trees, and varying the spacing to select a tree of particular species and/or growth form. Existing snags greater than ten (10) inches DBH were marked for retention.

Trees selected for retention are dominant and co-dominant from a variety of conifer and hardwoods species greater than 6.0 inches DBH. Some smaller shade tolerant trees such as western red cedar and western hemlock may be marked to maintain the existing species diversity. Trees selected for retention have at least a 30 percent live crown ratio so that live crown expansion and accelerated diameter growth will be more likely following treatment (Daniel, et. al. 1979)[1].

Variable no-harvest buffers have been placed around all streams within the harvest unit. No-harvest means that some trees may be felled in these areas to create or enhance habitat but trees will not be removed.

Most of the streams adjacent to the unit are non-fish bearing, intermittent, or ephemeral streams. The project area includes two fish-bearing streams adjacent to the harvest unit (Hubbard Creek and Camp Creek). Downstream of the harvest unit, the haul route follows Hubbard Creek.

There are approximately 260 snags 8-19 inches DBH and 10 snags 20 inches DBH or greater.

Timber Cruising

This project will yield approximately 1.82 MMBF of timber available for auction.

A small amount of additional timber could potentially be included as modifications to this project. These additions will be limited to the removal of individual trees or small groups of trees that are blown down, injured from logging, are a safety hazard, or trees needed to facilitate the harvest. Historically, these additions have been less than ten percent of the total sale quantity.

Firewood

Firewood cutting and salvaging of logging debris (slash) will occur in cull decks, logging landings, and near roads after commercial thinning activities have been completed.

[1] Daniel, T.W., J. Helms, and F. Baker. 1979. Principles of Silviculture. McGraw Hill Book Company, 2nd edition.

Timber Yarding

The action will require approximately 76 acres of skyline cable yarding and 53 acres of ground-based yarding (Table 1). In addition, approximately four (4) acres will be cleared or brushed for road and spur right-of-ways to access the harvest areas. Up to ten (10) acres of additional, incidental ground-based logging may be necessary (i.e. removal of guy line anchor trees, isolated portions of unit, etc.) and will occur on gentle slopes (less than 35 percent), during the dry season.

Table 1. Timber Yarding Summary.

Unit	Yarding Method (acres)			
	Aerial	Cable	Ground*	Roads Right-of-Ways
1	0	76	53	4
Total	0	76	53	4

* Up to 10 acres of additional, incidental ground-based yarding may occur.

Timber Hauling

Approximately 2.96 miles of rocked road and 1.47 miles of unsurfaced road will be used for the hauling of timber, for a total of approximately 4.43 miles of haul route. A total of 0.77 miles of existing road will be renovated. Approximately 1.59 miles of a newly constructed spur and roads, and renovated roads (see definitions, pg. 14) will be used for dry-season haul. Spurs and roads may be rocked at the purchaser's expense to permit wet weather hauling. These spurs and roads include: 26-7-18.0; 26-7-19.2; 26-7-19.7; 26-7-19.8; 26-7-19.9; 26-7-19.10; 26-7-19.11; 26-7-19.12; 26-7-19.19; 26-7-20.4B, and Spur 1.

Fuel Treatment

Slash within 50 feet of logging landings will be hand and/or machine-piled and burned (under the direction of a written site-specific prescription or "Burn Plan") or spread over natural surfaced roads (i.e. the first 100 feet of Spurs). Slash piles from approximately 15 acres will be burned at landings.

Remaining fine fuels generated during the commercial thinning process will be scattered throughout the treatment unit.

Road Activities

The action will include dry season and wet season logging activities and use existing roads to the greatest extent practical. Following the project design features described on pgs. 5-11, road construction, renovation, and decommissioning will be restricted to the dry season (normally May 15th to October 15th).

Construction

Approximately 0.80 miles of new road and 0.02 miles of spur road will be constructed, for a total of 0.82 miles of new construction. Newly constructed roads will be 26-7-18.0, 26-7-19.7, 26-7-19.9 (portion), 26-7-19.10, 26-7-19.11 (portion), 26-7-19.19, 26-7-20.4 Segment B, and Spur 1. Approximately one (1) acre of new construction is within the riparian reserve. The operator may rock natural surface roads and spurs at their own expense (pg. 4).

Renovation

Approximately 0.77 miles of existing roads will be renovated. Road renovation will consist of installing or maintaining drainage structures (culverts and drainage ditches), reshaping the road surface, replenishing road surface with crushed rock where deficient, and brushing road shoulders. A temporary culvert will be installed on the 26-7-19.8 and another on the existing portion of the 26-7-19.11 roads. The roads that will be renovated are numbered 26-7-19.2, 26-7-19.8, 26-7-19.9 (portion), 26-7-19.11 (portion), 26-7-19.12, and 26-7-20.4 Segment A and a portion of Segment B.

Improvement

No road improvements are planned for any roads (see definitions, pg. 14).

Decommissioning

After harvest, 26-7-18.0, 26-7-19.2, 26-7-19.7, 26-7-19.8, 26-7-19.9, 26-7-19.10, 26-7-19.11, 26-7-19.12, 26-7-19.19, 26-7-20.4 Segment B, and Spur 1, a total of approximately 1.65 miles will be decommissioned by blocking with trench barriers after they are water-barred, and mulched with logging slash where available, or mulched with weed free straw when logging slash is not available.

Any roads or spurs that are rocked at purchasers expense will be decommissioned by removing cross-drains/culverts, water-barring, mulching with logging slash where available (or with straw if logging slash is not available), and blocking with trench barriers.

In addition, approximately 0.6 miles of the pre-existing natural-surfaced road, 2.0 miles of pre-existing compacted skid trails, and 0.4 acres of pre-existing landings and compacted log-deck ground will be sub-soiled. Sub-soiling roads and trail segments inside the Timber Reserve Area or in the Marbled Murrelet Seasonally restricted Operations Area (see Figure 2) will occur during the dry season and follow appropriate wildlife seasonal restrictions.

Compliance and Monitoring

Compliance with this decision will be ensured by frequent on the ground inspections by the Contracting Officer's Representative. Monitoring will be conducted as per the direction given in Appendix I of the RMP (pgs. 189-209).

SECTION 2 – PROJECT DESIGN FEATURES

The following project design features and best management practices are adopted as part of the implementation of this decision to reduce adverse environmental impacts. They are designed to avoid, minimize or rectify impacts on resources. These measures will also help projects meet the objectives of the Aquatic Conservation Strategy.

Seasonal Restrictions

Seasonal restrictions will be applied based on ESA consultation criteria to reduce impacts to federally listed species and in accordance with best management practices to reduce sedimentation impacts to aquatic species, and to reduce soil compaction in order to maintain soil productivity. These restrictions are described below.

Project Design Features to Minimize Effects to Wildlife Threatened & Endangered Species

Project design features for Dog Bone Commercial Thinning and Density Management were based on project design criteria from the following documents:

- Letter of Concurrence (LOC) regarding the *Reinitiation of consultation on Roseburg District Bureau of Land Management FY 2005-2008 Management Activities* (Ref. # 1-15-05-I-0511 [June 24, 2005]), and the
- *Upper Umpqua Watershed Plan Decision Record* (October 8, 2003)**.**

➢ Northern Spotted Owl

Disturbance

There are no known spotted owl sites, activity centers, or unsurveyed suitable habitat within 65 yards of unit boundaries. Therefore, seasonal restrictions for spotted owls are not necessary unless subsequent surveys locate an activity center or nest site within 65 yards of unit boundaries.

Habitat

Suitable Habitat

- No suitable spotted owl nesting, roosting, and foraging habitat will be removed or modified by this project.

Dispersal-only Habitat

- Approximately 133 acres of dispersal-only habitat will be degraded. The expected post-harvest canopy cover (based on stand average) for the unit will range between 62 to 100 percent. In addition, within 100 yards of adjacent suitable habitat, the post-harvest canopy cover will range between 83-100 percent. Therefore, the minimum stand average canopy closure of 60 percent is expected to be maintained in thinned stands. Thus, these stands are expected to retain dispersal function because post-project stand average canopy cover will not fall below 60 percent.

Critical Habitat

- The proposed project area is not located in designated Critical Habitat for the northern spotted owl.

- Marbled Murrelet

Disturbance

This project is within the Marbled Murrelet Inland Management Zone 2 (within 35-50 miles of the coast). There are no known occupied sites within 100 yards of the unit. However, there is unsurveyed suitable habitat within 100 yards of the unit. Therefore, daily operating restrictions from April 1st thru August 5th, both days inclusive, are necessary for marbled murrelets within 100 yards of the "Marbled Murrelet Habitat Areas" as shown on Figure 2.

Habitat

- In accordance with the Letters of Concurrence from the U.S. Fish & Wildlife Service for activities on the Roseburg District (Ref. # 1-15-05-I-0511 [June 24, 2005]), surveys for potential structure were conducted (Oct. 2007) following Residual Habitat Guidelines (pgs. 68-69, Plan Maintenance for FY2004, *Annual Program Summary & Monitoring Report – FY2005*). Approximately five (5) acres of potential structure for marbled murrelets were discovered within the original boundaries of the unit.

  After reconfiguration of unit boundaries and eliminating approximately five (5) acres of potential habitat for the marbled murrelet, one (1) platform tree remains located in the unit. Interlocking canopies within at least half-site potential tree height of the platform tree will be maintained to retain local micro site conditions.

- There is suitable marbled murrelet habitat adjacent to the north and east boundaries of the unit. Mid-seral stands adjacent to suitable habitat will be treated with a lighter thinning prescription, maintaining interlocking canopies within at least half-site potential tree height from suitable habitat.

Critical Habitat

- The proposed project area is not located in designated Critical Habitat for the marbled murrelet.

- Snags

Riparian Reserves

Snags will be retained or created in the following manner in accordance with direction from the *Upper Umpqua Watershed Plan Decision Document* (pgs. 6-7; Oct. 8, 2003):

- Snags greater than 20 inches DBH and greater than 16 feet tall were located and counted on a stand-by-stand basis (as noted previously on page 3).
- Tree marking was designed to protect existing snags to the extent possible.
- Those snags that pose a safety concern will be cut and left as coarse woody debris.
- Within two years of the completion of harvest activities, if there are less than three snags per acre on north slopes and one snag per acre on south slopes, snags will be created on a per acre basis from the larger diameter class of existing live

trees to meet the minimum interim needs. Trees damaged from the harvest will be preferentially selected for treatment (e.g. girdling or fungal inoculation) and recruited as snags.

General Forest Management Area

Within the upland portions of the harvest unit (i.e. outside of Riparian Reserves), snags will be retained in the following manner:

- Snags greater than 20 inches DBH and greater than 16 feet tall were located and counted on a stand-by-stand basis (as noted previously on page 3). The residual stand following harvest will provide a pool of candidate trees for future snag recruitment and additional snags may be created incidentally through the harvest operations.

- Coarse Woody Debris

Riparian Reserve

Coarse woody debris will be retained or created in the following manner in accordance with direction from the *Upper Umpqua Watershed Plan Decision Document* (pg. 7; Oct. 8, 2003) within the unit:

- All existing coarse woody debris will be retained.
- Within two (2) years of the completion of harvest activities, up to two (2) trees per acre (approximately 64 trees) will be recruited as additional coarse woody debris. Trees that have fallen since the completion of harvest activities will be credited to recruitment of coarse woody debris. Trees damaged from the harvest will be preferentially selected for falling and recruited as coarse woody debris.

General Forest Management Area

Within the uplands (i.e. outside of Riparian Reserves), coarse woody debris will be retained or created in the following manner in accordance with RMP guidance within the unit:

- During partial harvests early in the rotational cycle it is not necessary to fall the larger dominant or co-dominant trees to provide coarse woody debris logs (pg. 53, Plan Maintenance for FY1996, *Annual Program Summary & Monitoring Report – FY2005*).
- There is approximately 782 linear feet/acre of decay class 1 or 2 coarse woody debris that is typical of the development cycle of the stand (i.e. at least 8-11 inches diameter). The residual stand following harvest will provide a pool of candidate trees for future coarse woody debris recruitment and additional wood debris may be created incidentally through the harvest operations.

Project Design Features to Minimize Erosion and Sedimentation Effects to Aquatic Species

To protect aquatic resources within riparian areas, a variable width streamside no-harvest buffer has been established along all streams and wet areas. The variable buffer width is ten (10) to 60 feet from the outer edge of the active stream channel for all non-fish bearing streams. The buffer width varies to include areas of instability, areas of riparian vegetation, and sensitive areas identified during site review. A 100 foot no-harvest buffer has been established along the two (2) fish bearing streams adjacent to the harvest area.

- At a minimum, one-tree retention has been maintained along the stream bank for bank stability. Minimum buffer widths have been used primarily on first order ephemeral or highly interrupted intermittent streams. These streams lack riparian vegetation, riparian habitat components, soil stability issues, and potential impact to downstream fisheries. Management within the buffer could include selected felling and/or girdling of trees where doing so will benefit riparian habitat. Trees will not be commercially removed from this buffer area.

- Stream channels and riparian habitat will be protected from logging damage by directionally felling trees that are within 100 feet of streams away from the streams and yarding logs away from or parallel to the streams.

- Yarding corridors parallel to non-fish bearing streams will be at least 40 feet away from the edge of the active stream channel and will be avoided along swale bottoms.

- Skyline yarding is required where cable logging is specified. This method will limit ground disturbance by requiring at least partial suspension during yarding. For all cable yarding, corridors will be 15 feet in width or less.

- Partial suspension and waterbarring yarding trails that are excessively furrowed will reduce the risk of slope failure and limit erosion. Partial suspension lifts the front end of the log during in-haul to the landing, thereby lessening the "plowing" action that disturbs the soil. In some limited, isolated areas partial suspension may not be physically possible due to terrain or lateral yarding. Excessive soil furrowing that occurs from "plowing" action will be hand waterbarred and filled with logging slash and/or other organic debris.

Project Design Features to Minimize Effects of New Road Construction and Road Use

- Roads will be located on ridge tops and on stable slopes. All new construction will be on slopes less than 30 percent. All road construction, renovation, and decommissioning will occur during dry periods of the year, normally between May 15th and October 15th or the onset of regular fall rains, as determined by weather patterns.

- All natural surfaced spur roads will be built and used during the dry season (normally May 15th to October 15th). They will be left in a condition that is resistant to erosion and sediment production before the end of each dry season of harvest (winterization), including the final harvest. Over-wintering natural surface spur roads in a condition that is resistant to erosion and sedimentation will be done by building, using, and winterizing natural surface spur roads prior to the end of the operating season.

- Winterization of natural surfaced spur roads will include: installation of waterbars, mulching the running surface with slash and blocking traffic with a trench barrier. Where slash quantity is insufficient, the mulching will be done using weed-free straw and seeding with native species (or a sterile hybrid mix if native seed is unavailable). Before the end of the first season mulching with straw and seeding as specified above will also be done on cut banks and fill slopes where new construction occurred. Implementation of winterizing measures will be restricted to the dry season (normally May 15th to October 15th).

- Erosion control measures (waterbarring, seeding, mulching, straw bales, bioengineering, etc.) will be applied where needed on newly constructed roads, renovated roads, or decommissioned roads and spurs.

- All haul routes used during wet season hauling will be inspected prior to haul activities to assess the current conditions of those roads as they pertain to sedimentation concerns to adjacent streams. Where winter haul occurs along a rocked route with defined stream crossings, road design is currently adequate. Project design features that reduce sedimentation such as silt fences, gravel lifts, and weather dependant operation specifications will prevent sediment contribution to live streams. Activities will be suspended when conditions are such that meaningfully, measurable stream-sedimentation will occur. The suspension will be lifted when conditions improve or remediation measures are implemented.

Project Design Features to Maintain Soil Productivity

- Ground-based operations will only occur when soil moisture conditions limit effects to soil productivity. These conditions normally occur between May 15th and the onset of regular fall rains (typically October 15th). During ground-based operations, soil moisture levels usually must be below 20 percent to a depth of ten (10) inches. In some situations soil moisture levels will need to be considerably less than 20 percent including: low slash levels, adverse skidder/forwarder haul up the steeper ground-based slopes, and harvesters on slopes 35 to 45 percent. After ground-based operations have begun, certain topographic positions that normally dry slower (e.g. depressions, swale bottoms and north-facing slopes) may need to be avoided or yarded later. The Contract Administrator will approve all ground-based operation start-up dates. Stop work orders can be issued if unseasonably wet conditions develop during the dry season that increases soil moisture above acceptable levels.

- Machines used for ground-based logging will be limited to a track width no greater than 10.5 feet. Forwarder, skid, and swing yarding trails will be designated. The forwarder will operate on branch and limb covered areas traversed by the harvester. Slash will be placed at the base of trees adjacent to the trails to protect the large roots at or near the surface.

- Harvesters and tree fallers will cut trees no further than twelve inches from the ground in trails so that there will be enough stump clearance for sub-soiling excavators.

- Compaction limiting tree growth inside the ground-based harvest portions of the Dog Bone commercial thinning will not exceed the following limit: ten (10) percent of the total ground-based area in trails, landings and log deck ground. Old compaction outside of the trails, landings and log deck areas used for the Dog Bone harvest will not be counted towards this 10 percent limit. Compaction limiting tree growth is defined here as compaction to a depth of four inches or more that increases soil bulk density by 15 percent or more or alters soil structure to platy or massive (See Definitions, pgs. 13-14).

- Skid trails which were created by prior entries will be re-used to the extent practical.

- Ground-based operations will be limited to slopes less than 35 percent except for harvester operations. Harvester operations may be allowed by the contract administrator on short slope pitches between 35 and 45 percent for distances up to 150 feet in length. On the these short

steeper pitches, other yarding techniques should first be considered; such as hand falling trees so the boles are oriented up or down the slope and then the harvester reaching-in to grab the trees as it remains on the slopes less than 35 percent.

- Within the Soil Moisture Restriction areas shown in Figure 2 (the slopes 70 percent and steeper, north of the 26-7-20.4 road and south of the 26-7-19.9 road), no cable yarding shall be permitted when soil moisture levels are high enough to squeeze water from soil samples. The soil is too wet if cable yarding creates glazed imprints on the soil surface that channels water downslope (generally greater than 30 percent soil moisture).

- To mitigate for soil compaction, up to 2.5 miles of ground-based harvest trails, 0.45 miles of old roadbed not needed for this sale and 0.4 acres of landings/log deck ground will be sub-soiled using an excavator with a sub-soiler attachment. Sub-soiled trails will be mulched with logging slash, where available.

- Slash piles will be burned during the late fall to mid-spring season when the soil and duff layer moisture levels are high (ROD/RMP, pg. 140) and the large down logs have not dried. This practice will confine burn impacts to the soil underneath the piles and will lessen the depths of impacts (i.e., loss of organic matter, and the change of soil physical properties, ecology and soil nutrients).

Project Design Features to Minimize Effects from Noxious Weeds

- Construction and logging equipment/machinery will be cleaned prior to moving into the project site. Cleaning will remove weed seed and help control and prevent the spread of noxious weeds.

- Areas of ground disturbance will be mulched with logging slash. If logging slash is unavailable, then native grass seed or a suitable alternative (i.e., native straw, wood chips, etc.) will be applied following ground disturbance.

- Noxious weed infestations and ground disturbance mitigations will be monitored.

Miscellaneous Project Design Features

- **Cultural resources -** A cultural resource inventory was completed July 2001 and no cultural resources were identified. Stipulations will be placed in the contract to halt operations in the event of inadvertent discoveries of new cultural resource sites (e.g. historic or prehistoric ruins, graves, fossils or artifacts).

- **Hazardous Materials -** To prevent and report accidental spills of petroleum products or other hazardous material and provide for work site cleanup:
    - The operator will be required to comply with all applicable State and Federal laws and regulations concerning the storage, use and disposal of industrial chemicals and other hazardous materials.
    - All equipment planned for in-stream work (e.g. culvert and/or ditch line upgrades) will be inspected beforehand for leaks.
    - Accidental spills or discovery of the dumping of any hazardous materials will be reported to the Authorized Officer and the procedures outlined in the "Roseburg

District Hazardous Materials (HAZMAT) Emergency Response Contingency Plan" will be followed.

- Hazardous materials (particularly petroleum products) will be stored in appropriate and compliant UL-Listed containers and located so that any accidental spill will be fully contained and will not escape to ground surfaces or drain into watercourses.
- Other hazardous materials such as corrosives and/or those incompatible with flammable storage shall be kept in appropriate separated containment.
- All construction materials and waste will be removed from the project area.

SECTION 3 – THE DECISION RATIONALE

This decision implements the guidance provided in the Upper Umpqua Watershed Plan Decision signed October 8, 2003 for that portion of the plan covering the Dog Bone Commercial Thinning and Density Management project area. It incorporates the "adjustments made" as described in the Upper Umpqua Watershed Plan decision (pgs. 3-9).

The project design features listed above will minimize soil compaction, limit erosion, protect slope stability, protect wildlife, protect air and water quality, and protect fish habitat, as well as protect other identified resource values. I have reviewed the resource information contained in Table 2 "Summary of Effects of the Action" (below) and in Appendices A-J (available upon request from the Swiftwater Field Office).

This decision recognizes that impacts could occur to some of these resources; however, the impacts to resource values will not exceed those identified in the *Final - Roseburg District Proposed Resource Management Plan / Environmental Impact Statement* (PRMP/EIS, 1994). This decision provides timber commodities resulting from silvicultural treatments whose effects to the environment are within those anticipated and already analyzed in the PRMP/EIS.

As a result of this decision, commercial thinning and density management actions will be undertaken to: (1) maintain healthy growth rates and contribute timber for the local and regional economy while protecting certain forest components for wildlife in stands on BLM lands within GFMA, and (2) accelerate stand diversity in mid-seral forests on BLM lands within the Riparian Reserves.

The variable density thinning treatments (i.e. low-, moderate-, and high-residual density) will develop late-successional characteristics more quickly including multiple canopy layers, large trees with large limbs, and vegetative diversity. In the long-term, the quality of dispersal habitat for the northern spotted owl will improve, as well as provide future nesting habitat for the northern spotted owl and marbled murrelet.

My predecessor reviewed the public comments from the EA and provided additional time for interested parties to develop input and to participate in a field tour of the project area. This interactive participation resulted in substantive adjustments in the proposed action initially presented in the Upper Umpqua Watershed Plan EA. These adjustments were incorporated in the Upper Umpqua Watershed Plan Decision signed October 8, 2003 and subsequently in the project design features for this project.

Coho Salmon
On February 4, 2008, the National Marine Fisheries Service (NMFS) notified the OR/WA BLM that the Oregon Coast coho salmon was listed as threatened under the ESA. The BLM is required to consult with NMFS on any action that the BLM determines "may affect" the Oregon Coast coho salmon.

Prior to NMFS's determination, the Roseburg District made a determination that this project will result in a "may effect, not likely to adversely affect [NLAA]" in the Upper Umpqua Watershed Density Management Plan Biological Assessment (Sept. 30, 2005) prepared for consultation with NMFS.

A Letter of Concurrence was received from NOAA Fisheries for the Upper Umpqua Density Management Plan (NMFS No. 2007/08162) dated January 31, 2008 NOAA Fisheries concurred with the Roseburg District's conclusion that the proposed activities are *not likely to adversely affect* (NLAA) the Oregon Coast coho salmon.

Special Status Species
On July 26, 2007, the Oregon/Washington BLM revised its Special Status Species list and policy in IM-OR-2007-072. Updates to Oregon/Washington Special Status Species include: the removal of the previous categories of Bureau Assessment and Bureau Tracking, the addition of the category of "Strategic Species", updates to the criteria for the creation of Bureau Sensitive Species, and changes to the list of species that are Sensitive or Strategic.

Bureau Sensitive Species will continue to be managed in compliance with BLM National Manual and OR/WA State Policy (BLM 6840) as they were prior to IM-OR-2007-072. Policies from BLM 6840 do not apply to Bureau Strategic species (IM-OR-2007-072). For Strategic species, analysis in NEPA documents is not required but if sites are located, field units are required to collect occurrence data and enter into the corporate database (i.e. GeoBOB).

Aquatic Conservation Strategy (ACS)
In March 2007, the U.S. District Court, in Pacific Coast Federation of Fishermen's Association, et al. v. National Marine Fisheries Service, et al. and American Forest Resource Council, an Oregon nonprofit corporation, et. al. set aside the 2004 Final Supplemental Environmental Impact Statement for Aquatic Conservation Strategy (ACS FSEIS). The Upper Umpqua EA was written in 2003, according to the Northwest Forest Plan and prior to the 2004 ACS FSEIS. As such, the analysis within the Upper Umpqua EA addresses ACS in a Manner consistent with the March 2007 ruling.

- Standards and Guidelines, in effect in 2003 (prior to the 2004 ACS FSEIS), were adhered to when developing the project objectives and project design features (ROD/S&G, pgs. C-2 through C-3, C-11 through C-61) for application at the site level.
- The Upper Umpqua Watershed Plan (2003) is a combined watershed and environmental analysis. This plan contains the sixth and seventh-field watersheds considered during the planning of this project.
- Cumulative effects were considered in the Upper Umpqua Watershed Plan (pgs. 20, 27-28, 32-33, and E-14).
- The Upper Umpqua Watershed Plan analyzed ACS objectives and does not retard or prevent the attainment of ACS objectives (in effect in 2003). The Dog Bone project objective to accelerate stand diversity and development would maintain and restore the distribution, diversity, and complexity of watershed and landscape scale features to

ensure protection of the aquatic systems to which species, populations, and communities are uniquely adapted. Appendix D of the Upper Umpqua Watershed Plan EA outlines how ACS objectives would be achieved or how achievement of those objectives would not be precluded (pgs. D-1 through D-6).

I find the Dog Bone Commercial Thinning and Density Management complies with the ACS requirements set forth in the ROD/RMP (1994) and the subsequent District Court interpretations in the Pacific Coast Federation of Fisherman's Association (PCFFA) v. National Marine Fisheries Service (NMFS), 71 F. Supp. 2d 1063, 1069 (W.D. Wash. 1999).

Definitions

Coarse Woody Debris: Those portions of trees that has fallen to the ground at least 20" in diameter.

Mid-Seral (Successional) Forest: Stage in forest development from crown closure to first merchantability usually ages 15-40. Due to stand density, brush, grass or herbs rapidly decrease in the stand. Hiding cover may be present.

Intermittent Stream: Any nonpermanent flowing feature having a definable channel and evidence of scour and deposition. Normally streams with seasonal flow.

Large Woody Debris (LWD): Large woody debris is fallen trees within the riparian areas that are at least 2 feet (0.6m) in diameter and 33 feet (10m) in length (ODFW, Methods for Stream Habitat Surveys).

Massive**:** Referring to a structureless state where the soil particles stick to each other but where there is no discernable arrangement into secondary units or peds. With compaction, the natural forest soil structure of granules and blocks become compressed into plates. With further compaction, the plates may disappear and the soil becomes very dense and structureless (massive).

Peak Flow: The highest of stream or river flow occurring in a year or from a single storm event (FEMAT, pg. IX-25).

Platy structure: A layering horizontally of plate-shaped peds. They usually form from compressive forces.

Road Construction: Work done that builds a new road or moves an old road to a new location.

Road Improvement: Work done to an existing road which improves it beyond its original design; adding new or additional culverts, turnouts, etc. (Standard Timber Sale Contract Stipulations, Section 102).

Road Renovation: Work done to an existing road which restores it to its original design; i.e. replacing culverts, grading the road, adding new rock to the existing rocked road (Standard Timber Sale Contract Stipulations, Section 102).

Soil Structure: The combination or arrangement of primary soil particles (primarily sand, silt, clay and organic matter) into secondary units or peds. The primary particles inside a ped stick together more strongly to each other than to other surrounding particles because of natural forces and binding substances derived from root exudates and microbial activity. Peds are in the form of granules, blocks, columns, prisms and plates.

SECTION 4 – PUBLIC INVOLVEMENT

For the Upper Umpqua Watershed Plan Environmental Assessment, comments were solicited from affected tribal governments, adjacent landowners and affected State and local government agencies. No comments were received from these sources. During the seventy-five day public review period for the Upper Umpqua Watershed Plan, comments were received from four individuals or organizations. As previously described in Section 3, comments and subsequent interaction with the public helped formulate the Upper Umpqua Watershed Plan decision (October 8, 2003) and is reflected in both that decision (pgs. 3-9) and in the project design features for this project.

Public notification of Dog Bone was available through the Summer 2007 and Fall 2007 Quarterly Planning Updates. No comments or information have been received pertaining to the design of the Dog Bone Commercial Thinning and Density Management project.

SECTION 5 – PROTEST PROCEDURES

The decision described in this document is a forest management decision and is subject to protest by the public. In accordance with Forest Management Regulations at 43 CFR § 5003 Administrative Remedies, protests of this decision may be filed with the authorized officer [Marci L. Todd] within 15 days of the publication date of the notice of decision/timber sale advertisement in *The News-Review*, Roseburg, Oregon.

43 CFR § 5003.3 subsection (b) states that: "Protests shall be filed with the authorized officer and shall contain a written statement of reasons for protesting the decision." This precludes the acceptance of electronic mail or facsimile protests. Only written and signed hard copies of protests that are delivered to the Roseburg District Office will be accepted. The protest must clearly and concisely state the reasons why this decision is believed to be in error.

Before including your address, phone number, e-mail address, or other personal identifying information in your comment, please be advised that your entire comment (including your personal identifying information) may be made publicly available at any time. While you can request that the BLM withhold your personal identifying information from public review, we cannot guarantee that we will be able to do so.

Protests received more than 15 days after the publication of the notice of decision/timber sale advertisement are not timely filed and shall not be considered. Upon timely filing of a protest, the authorized officer shall reconsider the decision to be implemented in light of the statement of reasons for the protest and other pertinent information available to her. The authorized officer shall, at the conclusion of her review, serve her decision in writing to the protesting party. Upon denial of a protest the authorized officer may proceed with the implementation of the decision.

For further information, contact Marci L. Todd, Field Manager, Swiftwater Field Office, Roseburg District, Bureau of Land Management, 777 NW Garden Valley Blvd; Roseburg, OR. 97471, (541) 440-4931.

_____ _____

Marci L. Todd, Field Manager Date
Swiftwater Field Office

Table 2. Summary of Effects of the Action: Dog Bone CT & DM.

Context (What?)	Intensity (How Much?)	Reason for not being significant.
Cultural Resources		
Cultural Resources.	An inventory was completed (July 2001) for cultural resources. No cultural resources were identified. Section 106 responsibilities under the National Historic Preservation Act were completed, in accordance with the 1998 Oregon State Historic Preservation Office protocols.	There will be no impacts to cultural resources.
Botany & Noxious Weeds (refer to *Appendix A* for details)		
Federally Threatened (FT) **Kincaid's lupine** and the Federally Endangered (FE) **rough popcorn flower**.	Surveys were completed (April 2007) and no sites were discovered.	No impacts to these two Federally listed plant species will occur since there are no known sites within the project area.
Bureau Sensitive botanical species.	Surveys were completed (April 2007) and no sites were discovered.	No impacts to Sensitive or Strategic botanical species will occur since there are no known sites within the project area.
Bureau Strategic botanical species.	Surveys were completed (April 2007) and no discoveries of Strategic botanical species were made.	Districts are required to enter occurrence data into the coporate database (GeoBOB) when sites of Strategic Species are discovered but they will not be considered as Special Status Species for management purposes (IM-OR-2007-072).
Noxious weeds.	There are scattered patches of Himalayan blackberry (approx. 0.5 acres), and Scotch broom (approximately. one (1) acre) throughout the project area.	The roads were treated both chemically and mechanically in FY2005. The project area will be monitored for treatment effectiveness and follow-up treatments will be conducted as necessary. The project design features will minimize the spread of noxious weeds.

Soils (refer to *Appendix B* for details)		
Mass Wasting and **Landslides.**	There are approximately nine acres of soils considered fragile due to slope gradient but suitable for forest management (FGR) within the units. In the short-term (less than ten years following harvest), the probability of landslide occurring on the nine (9) acres of FGR slopes will be in the low to moderate range (less than 30 percent). Any landslides that occur will likely be few in number and less than 0.15 acres in size. About 1.5 of the nine FGR acres are situated where landslides less than 0.15 acres in size could reach a non-fish bearing stream (below the 26-7-19.9 road at the head of a first order stream).	Areas where landslides might initiate and impact streams are only one percent of the sale area. The probability of landslide occurrence on FGR soils will be slightly higher than the No Action Alternative but still low to moderate. The probability of a landslide occurring and then impacting a stream is low. Effects of sediment in the stream bed from small landslides will have a low probability of being detected more than a few hundred feet downstream from the landslide during normal flow conditions. This is because small streams have low capacity for carrying sediment due to their small size and low flows.
Soil Productivity.	Following harvest and subsequent sub-soiling as described under "Decommissioning" on page 5, it is estimated that soil productivity will be slightly decreased (the number of acres with soil productivity gains are one to two acres less than those with losses) in the short-term (less than ten years).	Most of the net loss in soil productivity is a one-time loss resulting from getting the road transportation system in place. Sub-soiling of compacted trails will accelerate the long-term recovery of soil productivity. This recovery, the slow natural recovery of other impacted soils and the prospect of further sub-soiling of residual compaction at future entries should result in soil productivity being at-least maintained in the long-term.

Hydrology (refer to *Appendix C and D* for details)		
Peak Flows within the Analytical Hydrologic Units (AHU).	Commercial thinning is not expected to have any measurable impact on peak flow within fish-bearing waters below the treatment areas. At the project level there may be increases in peak flows during smaller storm events (less than two year interval) in small non-fish bearing streams. Flows of this size are geomorphically insignificant.	Thinning of overcrowded trees is not expected to have any measurable impact on stream flow within fish-bearing waters below the treatment areas. No measurable change in channel geometry will result.
Sedimentation.	Project design features will minimize soil erosion and sedimentation effects to aquatic species and aquatic habitat. Sediment produced, as a result of haul, will be of such small magnitude that it will not be meaningfully measurable.	Sedimentation will be maintained below meaningfully measurable levels or haul will be suspended.
Fisheries (refer to *Appendix E* for details)		
Oregon Coast Coho Salmon. (On February 4, 2008, the National Marine Fisheries Service (NMFS) notified the OR/WA BLM that the Oregon Coast coho salmon was listed as threatened under the ESA)	Prior to NMFS's determination, the Roseburg District made a determination that this project will result in a "may effect, not likely to adversely affect [NLAA]" in the Upper Umpqua Watershed Density Management Plan Biological Assessment (Sept. 30, 2005) prepared for consultation with NMFS.	A Letter of Concurrence was received from NOAA Fisheries for the Upper Umpqua Density Management Plan (NMFS No. 2007/08162) dated January 31, 2008 which concurred with the Roseburg District's conclusion that the proposed activities are *not likely to adversely affect* (NLAA) the Oregon coast coho salmon.
Essential Fish Habitat (EFH) for Coho Salmon and Chinook salmon.	Conservation measures incorporated into the project design features will prevent adverse effects to essential fish habitat.	Project will not adversely affect essential fish habitat. Therefore, consultation with NMFS is not required.

Bureau Sensitive Species	Oregon Coast coho salmon and Oregon Coast steelhead are documented within the project area. Oregon Umpqua Chub are suspected downstream of the project area. The project area includes fish bearing streams downstream of the harvest units along the haul route.	Project design features will minimize soil erosion and sedimentation effects to aquatic species and aquatic habitat.
Wildlife (refer to *Appendices F, G, H, and I* for details).		
In accordance with the Endangered Species Act, **consultation** with the U.S. Fish and Wildlife Service (USFWS) has been completed.	A letter of concurrence from the USFWS for the re-initiation of consultation on Roseburg District Bureau of Land Management FY 2005-2008 Management Activities [Ref. # 1-15-05-I-0511] was received June 24, 2005.	The USFWS concurred that this action is *not likely to adversely affect* the northern spotted owl, northern spotted owl critical habitat, marbled murrelet, and marbled murrelet critical habitat (pg. 30 [Ref. # 1-15-05-I-0511]). Project design features will be implemented in compliance with the letter of concurrence.
Noise/Visual Disruption of Northern Spotted Owl nesting behaviors.	There are no known spotted owl nests, activity centers, or unsurveyed suitable habitat within 65 yards of the harvest units.	No disruption effects to spotted owls will occur.
Northern Spotted Owl Habitat. There are four northern spotted owl sites (includes ten activity centers) that are located within 1.5 miles (*Coast Range provincial home range*) of the proposed harvest units. The South McGee (MSNO 2299A) site has an established 100-acre Known Owl Activity Center (KOAC).	Thinning will degrade 133 acres of dispersal habitat. However, since the treated stands will not be modified below 40 percent canopy cover, they will still function as dispersal habitat. No suitable habitat will be modified or removed.	Treatment of the mid-seral stands will improve the quality of dispersal habitat within 5-10 years. Thinning within the 32 acres of Riparian Reserve forest will facilitate the development of late-successional characteristics within the stand, including larger diameter trees and multiple canopy layers. Beneficial effects to dispersal habitat from thinning will persist until the upland GFMA portions (101 acres) of the stands undergo final harvest in the future. The USFWS concurs that this action *is not likely to adversely affect* spotted owls (pg. 19 [Ref. # 1-15-05-I-0511]).

Critical Habitat for the Northern Spotted Owl. Dog Bone is located outside of designated Critical Habitat for the northern spotted owl.	No treatment will occur within Critical Habitat.	There would be *no effect* to designated Critical Habitat for the northern spotted owl.
Noise/Visual Disruption of Marbled Murrelet nesting behaviors. The project area is located 36.8 miles from the coast, within Zone 2.	There is unsurveyed suitable marbled murrelet habitat adjacent to the north and east boundaries of Unit 1. The harvest units are approximately 5.9 miles from the nearest known occupied marbled murrelet site (Rattlesnake [MSNO-R3004]).	To avoid disruption to the marbled murrelet, Daily Operating Restrictions (two hours after sunrise to two hours prior to sunset) from April 1st thru August 5th, both days inclusive, will be implemented within 100 yards of unsurveyed suitable habitat. The USFWS concurs that the density management activities *are not likely to adversely affect* marbled murrelets (pg. 16 [Ref. # 1-15-05-I-0511]).
Marbled Murrelet Habitat.	Suitable nesting habitat will not be removed within or adjacent to the project area. Within the stands prescribed for thinning, surveys for trees with suitable platform structures were conducted (September 2006; March 2007) following the Residual Habitat Guidelines. Approximately five acres within the original unit boundary contained potential murrelet nest trees. The five acres was excluded from the unit boundary. One platform tree remains within the harvest unit.	Thinning will facilitate the development of future nesting habitat by increasing tree and limb growth rates; fostering the development of nesting platforms. In addition, thinning younger trees from around the older, large limbed trees will allow for greater access to potential nest platforms, thus providing an opportunity for murrelets to occupy these stands earlier. The USFWS concurs that the density management activities *are not likely to adversely affect* marbled murrelets (pg. 10 [Ref. # 1-15-05-I-0511]).

Critical Habitat for the Marbled Murrelet This project is located outside designated Critical Habitat unit for the marbled murrelet.	No treatment will occur within Critical Habitat.	There would be *no effect* to designated Critical Habitat for the marbled murrelet.
American Peregrine Falcon (Bureau Sensitive).	Harvest units do not contain suitable nesting habitat (e.g. cliffs or rock outcrops) for the peregrine falcon. However, based on the distribution of known peregrine sites within the watershed, peregrines are expected to hunt within the project area. The closest known peregrine site is located approximately 4.7 miles south of the proposed project area.	The action will not affect foraging habitat in a measurable way.
Bald Eagle (Bureau Sensitive). The bald eagle was delisted on July 9, 2007 as "threatened" under the Endangered Species Act (FR 72; No 130; 37346-37372). It is currently considered Bureau Sensitive.	No noise/visual disruption effects to bald eagles will occur due to this action since there are no known nests within 0.5 miles of the harvest units. Based on 2007 surveys, the nearest nest site is approximately 5.2 miles east of the proposed project area. No suitable habitat will be removed or modified.	No disruption effects to nesting bald eagles will occur and suitable nesting habitat will not be modified.
Fisher (Bureau Sensitive).	The harvest units are adjacent to suitable natal and foraging habitat. The harvest units are expected to be used for travel between stands of suitable habitat. The nearest recorded fisher observation occurred in the year 2000 approximately 6.6 miles to the west of the proposed project area (ONHP 2008).	The action will not affect natal or foraging habitat in a measurable way.

Fringed Myotis (Bureau Sensitive).	The harvest units contain a total of ten (10) large snags that may be suitable roosting habitat for fringed myotis bats. In addition, suitable habitat (e.g. late-successional forest associated with water; caves, rock crevices) is adjacent to the project area. This species is expected to roost and forage within the project area. The closest recorded fringed myotis observation was located 5.7 miles north of the project area.	Adjacent suitable habitat will not be modified or removed. PDFs for large snags will maintain suitable roosting habitat within unit boundaries. The action will not affect the forage opportunities or quality for fringed myotis bats in a measurable way.
Northwestern Pond Turtle (Bureau Sensitive).	Pond turtles may overwinter in the upland habitat. The nearest pond turtle observation recorded was located approximately 6.3 miles northeast of the project area.	The action will not affect upland overwintering habitat in a measurable way.
Purple Martin (Bureau Sensitive).	The harvest units do not contain suitable habitat (e.g. open areas with snags) for purple martins. Purple martins may forage over the canopy of the existing stand.	The action will not affect the forage opportunities or quality for purple martins in a measurable way.
Spotted Tail-dropper (Bureau Sensitive).	The harvest units contain habitat suitable for the spotted tail-dropper (e.g. moist coniferous forest with a substantial hardwood component), but there are no known sites within the project area.	No measurable impact to the spotted tail-dropper will occur since the post-treatment stand condition (i.e. maintaining hardwoods and down woody debris) appears to fall within the range of suitability for this species and its con-specifics.
Townsend's Big-eared Bat (Bureau Sensitive).	The harvest units contain a total of ten (10) large snags that may be suitable roosting habitat for Townsend's big-eared bats. In addition, suitable habitat (e.g. late-successional forest associated with water; caves, rock crevices) is adjacent to the project area. The species is expected to roost and forage in the project area.	Adjacent suitable habitat will not be modified or removed. PDFs for large snags will maintain suitable roosting habitat within unit boundaries. The action will not affect the forage opportunities or quality for Townsend's big-eared bats in a measurable way.

White-tailed Kite (Bureau Sensitive).	The harvest units do not contain and are not adjacent to suitable habitat (e.g. open grasslands, meadows, farmlands, etc.). Suitable habitat is located approximately 2.5 miles east of the proposed project area.	The action will not affect the forage opportunities in a measurable way.
Bureau Sensitive Wildlife Species.	Evaluation of the remaining Sensitive wildlife species was completed in September 2007 and no known sites or concerns were identified (except for those species discussed above).	No impacts to the remaining BS or BA wildlife species will occur since there are no known sites within the project area.
Bureau Strategic Wildlife Species.	There are no detections of Strategic Species, including broadwhorl tightcoil, pristine springsnail, Klamath tail-dropper, Merlin, or giant earthworm within or near the project area (Oregon Natural Heritage Program database, 2008).	Districts are required to enter occurrence data into the corporate database (GeoBOB) when sites of Strategic Species are discovered but they will not be considered as Special Status Species for management purposes (IM-OR-2007-072).