Chapter 2 – Alternatives

2.0 Introduction

The Final Environmental Impact Statement (FEIS) for the Kelsey Whisky Landscape Plan and Proposed Resource Management Plan Amendment addresses specific management actions proposed to be implemented within the next several years. In most cases, no additional analysis under the National Environmental Policy Act (NEPA) would be required. The FEIS presents four alternatives, including a No Action Alternative.

2.1 Summary of Alternatives

Two alternatives present a change in land use allocation with the proposal of a Research Natural Area/ Area of Critical Environmental Concern (ACEC). If one of these two alternatives was selected, an amendment to the Medford District Resource Management Plan (RMP) would be required. Road closures in alternatives 1, 2, and 4 would also require amending the RMP. Such amendments would occur in conjunction with a Record of Decision (ROD) associated with these proposals. Each of the three action alternatives present proposals at the activity level including timber harvest, fuels reduction, road construction or decommissioning, forest health treatments, and habitat improvements. While the analysis area includes the entire fifth-field watershed, the proposed management actions are located north of the Rogue River, in the Glendale Resource Area.

Alternative 1 – RMP Implementation – Timber Harvest

Alternative 1 emphasizes implementation of timber harvest objectives for Matrix lands, and is consistent with the objective to provide a sustainable supply of timber and other forest products (USDI 1995, p.72).

Alternative 2 – RMP Amendment (ACEC) and RMP Implementation – Timber Harvest Modified

Alternative 2 focuses on change in RMP guidance for late successional forest in approximately one half of the East Fork Whisky Creek subwatershed and proposes a new Area of Critical Environmental Concern (ACEC). Designation of an ACEC would require an amendment of the RMP management guidelines for a specific portion of General Forest Management Area by eliminating scheduled timber harvest, commercial thinning, road building, fuels treatments, and by modifying fire response actions. This alternative also emphasizes implementation of the RMP with timber harvest on Matrix lands, with some modifications of the timber harvest planned under Alternative 1.

Alternative 3 (No-Action) – No Planned Timber Harvest

RMP related routine management actions would continue to occur, including fire suppression, road maintenance and plantation maintenance. Planning for RMP implementation actions would be ongoing in the Resource Area, and would include the Wild Rogue North Watershed. The opportunity for timber harvest, fuels treatments and forest health treatments in this watershed would continue to be a viable option for future entries.

Alternative 4 – RMP Amendment and RMP Implementation - Forest Health Management

Non-commercial forest health treatment is emphasized in Alternative 4, as well as change in RMP guidance for late successional forest in the East Fork Whisky Creek subwatershed as the proposed ACEC for Alternative 2 would emphasize the entire subwatershed. Timber harvest would be considered only where it would benefit wildlife habitat, fuels management or forest health.

Under each of the action alternatives, proposed activities may be implemented soon after the Record of Decision is signed. Although there are no current proposals, additional management actions within this planning area can be anticipated to be proposed in the future. The Wild Rogue North Watershed contains valuable economic resources in Matrix lands. Such actions would be analyzed in compliance with NEPA when proposed.

Table 2-1 presents a summary of the actions and effects to land use allocations under each alternative. Appendices 2 and 3 present a summary of the specific management actions and projects which would be implemented under each alternative. Appendix 2 also contains a description of harvest methods proposed within the action alternatives.

2.2 Alternatives considered but eliminated

Substantial changes in basic land use allocations were considered during early planning and scoping, which would have modified existing Late- Successional Reserve (LSR) and General Forest Management Area (GFMA) boundaries. The primary objectives in altering the existing land use allocations were to improve management by placing the LSR/GFMA boundaries along major ridge tops in the watershed, to enhance LSR function while still maintaining commercial timber availability, and to keep the same relative proportions of GFMA and LSR acreage. This alternative would have emphasized timber harvest on the modified GFMA lands, with both commercial and non-commercial forest management treatments occuring throughout the planning area. An amendment to the Medford District Resource Management Plan (RMP) would have been required to support this alternative.

This alternative was analyzed in some detail but was found, in the end, to not be implementable while remaining in compliance both with the Northwest Forest Plan (NFP), the RMP and the Endangered Species Act. Currently, marbled murrelet critical habitat in the planning area, further protected by LSR designation, is managed in such a way as to not interfere with the potential nesting by marbled murrelets. If the site were to be modified to GFMA status, regeneration harvest might be considered a harvest technique, but would have the potential to interfere with nesting practices of the marbled murrelet. Potential harvest activity on GFMA would, then, have to be restricted to maintain consistency with the intent of critical habitat under ESA, but would then be inconsistent with the intent for GFMA under the NFP and the RMP. This alternative can no longer be considered viable and is, therefore, not a reasonable alternative.

Several comments were received during the scoping process suggesting that portions of the planning area should be either designated as wilderness, or receive some other protective designation to restrict road construction, logging and other activities. In 1979 and 1980 a substantial portion of the analysis area, both North and South of the Rogue River, was reviewed for possible addition to the National Wilderness Preservation System. Ultimately this area was not added, with that decision being appealed to the Interior Board of Land Appeals and affirmed for BLM. A second possibility was to consider some other large scale protective designation to maintain the roadless quality of the area. Establishing a wilderness study area, designating wilderness or other protective designations for thousands of acres was a level of planning that this implementation EIS does not encompass. In keeping with the scale of the actions proposed herein, however, a Research Natural Area/ Area of Critical Environmental Concern (ACEC) designation supporting some of the same values is examined under alternatives 2 and 4.

2.3 Management Common to Alternatives # 1, 2 and 4

Project design features for projects in the Medford District are specified in the Medford District Resource Management Plan (RMP) and include Best Management Practices (BMP) (USDI 1995, Appendix D). The RMP is consistent with the standards and guidelines identified in the NFP ROD & Standards and Guidelines which were developed as a part of the Northwest Forest Plan FSEIS process and "singularly and collectively, they avoid, rectify, reduce or eliminate potentially adverse environmental impacts of forest management activities." (USDA/USDI 1994b, pg 29). As directed by Executive Order 13186, the BLM

Table 2-1 Summary of management in all alternatives. Treatment acreages and mileages are approximations for analytical purposes, based on preliminary field review and existing spatial data. Actual treatment acres may vary slightly.

Management	1 Preferred	2	3 No-Action	4
Land Use Allocations Which Amend the Medford District Resource Management Plan				
Change in LSR from RMP allocations	-----	-----	-----	-----
Change in GFMA from RMP allocations	-----	-----	-----	-----
Change in acres available for timber mgt	-----	-470 acres	-----	-1,093 acres
Connectivity Blocks two blocks, 1,258 acres	-----	-----	-----	-----
Designation of East Fork Whisky Creek ACEC	-----	+1,677 acres	-----	+2,844 acres
Off-Highway-Vehicle Restrictions Which Amend the Medford District Resource Management Plan				
Miles closed due to road decommissioning	9.7 miles	9.7 miles	-----	13.6 miles
Roads closed with gates	5.1 miles	5.1 miles	-----	9.2 miles
Roads closed with barricades	1.8 miles	1.8 miles	-----	-----
Leasable Mineral and Energy Resources Amendments to the Medford District Resource Management Plan (Area is describe in Medford RMP as low potential for oil & gas and geothermal resources)				
No leasing available	-----	-----	-----	-----
No surface occupancy stipulation	-----	+470 acres, not including pre-existing constraints	-----	+1,093 acres, not including pre-existing constraints

Table 2-1 Summary of management in all alternatives. Treatment acreages and mileages are approximations for analytical purposes, based on preliminary field review and existing spatial data. Actual treatment acres may vary slightly.

Management	1 Preferred	2	3 No-Action	4
Special leasing, stipulations Aquatic Conservation Strategy	-----	-----	-----	-----
Special leasing stipulations, sensitive habitats	-----	-----	-----	-----
Standard leasing stipulations	-----	-470 acres	-----	- 1,093 acres
Utility Transmission Corridor or Sites and Special use Permit Opportunity Amendment to the Medford District Resource Management Plan (Area does not include occupied corridors, or have known interest in special use permits or sites)				
Use/permit Restricted acres	-----	+1,667 acres	-----	+2,844 acres
Activity / Implementation Actions Affecting the Planning Area Transportation System				
Permanent Road Construction	-----	-----	-----	-----
Temporary Road Construction	1.5 miles	1.9 miles	-----	-----
Road Renovation	7.1 miles	7.1 miles	-----	7.1 miles
Reestablish Orginial Road Prism	7.4 miles	-----	-----	-----
Road Outslope & Waterdip	-----	7.4 miles	-----	7.4 miles
Road Decommission	9.7 miles	9.7 miles	-----	13.6 miles
Road closed with gates	5.1 miles	5.1 miles	-----	9.2 miles
Road closed with barricades	1.8 miles	1.8 miles	-----	-----
Road to be rocked	6.7 miles	6.7 miles	-----	6.7 miles
Road to be paved (byway)	-----	-----	-----	10.3 miles

Table 2-1 Summary of management in all alternatives. Treatment acreages and mileages are approximations for analytical purposes, based on preliminary field review and existing spatial data. Actual treatment acres may vary slightly.

Management	1 Preferred	2	3 No-Action	4
Forest Stand Treatments Proposed to Implement the Medford District Resource Management Plan				
Treatments Designed to Meet the Medford District Resource Management Plan Timber Management Objectives				
Regeneration harvest (RH, OR, OR/CT RH/CT, RH/OR)	531 acres 6,100-7450 MBF	355 acres 4,050-4950 MBF	-----	-----
Commercial Thin (CT, CT/PCT)	930 acres 3,650-4,500 MBF	969 acres 3,300-4,050 MBF	-----	955 acres 3,150-3850 MBF
Total Harvest Treatments	1,461 acres 9,750-11,950 MBF	1,324 acres 7,350-9,000 MBF	-----	955 acres 3,150-3,850 MBF
Tractor Yarding	-----	-----	-----	-----
Cable Yarding	1012 acres	874 acres	-----	700 acres
Cable/Helicopter	197 acres	171 acres	-----	122 acres
Cable/Tractor	164 acres	155 acres	-----	51 acres
Helicopter Yarding	98 acres	124 acres	-----	82 acres
Precommercial Thin	50 acres	50 acres	-----	61 acres
Fuels Treatments Associated with RMP Timber Objective Treatments				
Slash/Pile (SP)	1,829 acres	1,751 acres	-----	1,659 acres
Broadcast Burn (BB,UB,UB/SP)	807 acres	740 acres	-----	261 acres
Mechanical Fuels Treatment (MFT)	51 acres	51 acres	-----	51 acres
Treatments Designed to Meet RMP Non-Timber Objectives (e.g., forest health, wildlife habitat, fuels, etc.)				
Partial Cut (CDM, CDM/NDM)	328 acres 700-850 MBF	329 acres 700-850 MBF	-----	328 acres 700-850 MBF
Tractor Yarding	1 acre	1 acre	-----	-----

Table 2-1 Summary of management in all alternatives. Treatment acreages and mileages are approximations for analytical purposes, based on preliminary field review and existing spatial data. Actual treatment acres may vary slightly.

Management	1 Preferred	2	3 No-Action	4
Cable Yarding	103 acres	103 acres	-----	103 acres
Helicopter Yarding	137 acres	137 acres	-----	137 acres
Cable/Helicopter	51 acres	51 acres	-----	51 acres
Cable/Tractor	37 acres	37 acres	-----	37 acres
Non-Commercial Density Management (LSR)	181 acres	181 acres	-----	181 acres
Pine enhancement/ maintenance (West Fork Whisky Cr.) (Matrix)	1,091 total acres, 561 acres CT 550-650 MBF	1,091 total acres, 561 acres CT 550-650 MBF	-----	1,105 total acres 575 acres of CT 550-700 MBF
Pine Conversion; Pine to Douglas-fir (Quail Cr. fire) (LSR)	221 acres -----	221 acres 10 MBF	----- -----	221 acres -----
Fuels Treatments Associated with RMP Non-Timber Objective Treatments				
Slash/Pile (SP) Underburn (UB, UB/SP)	1,847 acres 1,129 acres	1,823 acres 1,129 acres	----- -----	1,784 acres 1,129 acres
Mechanical Fuels Treatments	289 acres	289 acres	-----	302 acres
RMP Fire Suppression Priorities and Equipment Limitations				
Wildfire Suppression	Full Fire Suppression	Full Fire Suppression	Full Fire Suppression	Full Fire Suppression but limits on heavy equipment ACEC
Wildlife Habitat Enhancement to Meet RMP Objectives				
Spring/Pond Enhancement	4 sites	4 sites	-----	4 sites

BB Broadcast Burn
CDM Commercial Density Management
CT Commercial Thin
MFT Mechanical Fuels Treatment
NDM Non-commercial Density Management
OR Overstory Removal
P Hand Pile, burn piles
PCT Pre-commercial Thin
RH Regeneration Harvest
SL Slash
UB Underburn
L&S Lop and Scatter
MBF Thousand Board Feet
SP Slash/Pile

will comply with the requirements to protect, restore, enhance, and manage habitat of migratory birds and prevent the loss or degradation of remaining habitat on BLM lands. For ease of reference, many of the project design features are included below.

The following issues provide a focus for identifying project design features, environmental analysis and a basis for resulting decisions. Key issues and additional issues of interest are presented which allow for a broad understanding of the proposed actions and their scope.

Key Issues:

a) Fire and Fuels
b) Timber Management
c) Late-Successional Habitat
d) Roads/Transportation System

2.3.1 Fire and Fuels

Fuels Treatments

An array of treatments designed to reduce hazardous fuels is proposed for the project area. The type of treatment utilized is dependent on existing and projected fuel loadings, existing vegetative conditions, slope and access. Proposed treatments include manual and mechanical methods in combination with prescribed burning.

Due to the unnatural accumulation of fuels that exist throughout the Kelsey Whisky Planning Area, a variety of fuels management treatments are planned. In most cases, more than one type of treatment is planned before a prescribed burn would be implemented. By treating fuels first either manually or mechanically, the fuel loading can be reduced to more natural levels before fire is reintroduced to the landscape. By treating fuels through multiple entries, risks to private property and the environment would be mitigated.

Prior to prescribed fire being utilized as a slash treatment or reintroduced to the landscape as a maintenance burn, a prescribed burn plan would be written, reviewed by fuels management specialists and adjacent private landowners, if any, and authorized by the Field Manager. A prescribed burn plan is comprised of many components and is written, in part, to identify the objectives of the burn, complexity of the burn and issues that need to be mitigated. Some of the major components of a burn plan include: burn objectives, weather parameters, fire behavior modeling, risk analysis, complexity analysis, ignition plans and maps, and safety plans.

Prior to the ignition of a treatment unit, coordination would occur with the National Weather Service and with the Oregon Department of Forestry to obtain smoke management clearance. The burn boss for the prescribed fire plan would complete a final field review on the day of the burn with a Go/No-Go checklist which is designed to ensure that the burn is within all planned parameters and that resource and safety objectives will be met.

Fuels have accumulated within the project area, due to the absence of fire, which precludes single entry fuels treatment. The energy released from prescribed fire as the initial entry would exceed desired intensity levels and have undesirable effects on vegetation and soil. Therefore, a combination of mechanical or manual treatments with prescribed fire is necessary to insure all resource objectives are met.

Fuel Modification Zones (FMZs) would be created along major ridge lines. Widths are variable dependent upon topography and fuel types but generally are 1/4 mile. One objective of establishing a Fuel Modification Zone is to reduce the potential for a crown fire to start within this zone. This, in turn, would reduce the intensity and size of a wildfire. To accomplish this, ladder fuels need to be eliminated and crown closures need to be reduced.

Manual treatments would generally consist of hand cutting of existing ladder fuels (brush and saplings) and then hand piling this material so it can be burned. In some cases, dense stands of small conifers would be thinned to space out the stems and reduce the chance of crown fires. Mechanical treatments would utilize the use of a “slashbuster” machine which uses a

rotating cutting head mounted on a tracked excavator with a reach of approximately 30 feet and would be limited to slopes less than 50 percent. Prescribed fire treatments would consist of hand pile burning, underburning or broadcast burning. These treatments may be utilized as an initial treatment or as a follow-up treatment to further reduce the accumulation of slash and natural fuels across the landscape. Slashing brush and hardwoods would be done no closer than 25 feet of streams. Underburns and pile and burn would be allowed within 50 feet of streams. There would be no broadcast burning within 50 feet of streams.

Future underburns may also be implemented to help maintain the stand and prevent a future build-up of fuels. These underburns would be light treatments and help maintain the reduced fire hazard following the initial slashing and pile burning treatment. Typically, maintenance underburns would occur 2-7 years following the initial treatments but would be driven by the condition of the stand and regrowth of slashed vegetation.

If conditions warrant, fuels treatments would be reexamined at any stage of treatment to determine current applicability. At the discretion of resource specialists, planned treatments may be refined to better meet the objectives outlined in this FEIS.

Mechanical fuels treatments that entail stem removal would be limited to trees less than 11 inches diameter at breast height (dbh) to assure maintenance of potentially suitable northern spotted owl habitat.

Fire Suppression

The Bureau of Land Management has a master cooperative fire protection agreement with the Oregon Department of Forestry (ODF). This agreement delegates the responsibility of fire protection of all lands within the planning area to the Oregon Department of Forestry. This contract directs ODF to take immediate action to control and suppress all fires. Their primary objective is to minimize total acres burned while providing for fire fighter safety. The agreement requires ODF to control 94 percent of all fires before they exceed 10 acres in size. Under all Alternatives, full fire suppression tactics would be utilized to minimize the size of any wildfire. Areas within the planning area which require special suppression methods designed to minimize damage to unique habitat and resources would be limited to the proposed East Fork Whisky Creek Research Natural Area/ Area of Critical Environmental Concern under alternatives 2, and 4.

Air Quality

Prescribed burning operations would follow all requirements of the Oregon Smoke Management Plan and the Department of Environmental Quality Air Quality and Visibility Protection Program. Prescribed burns would be conducted within the limits of a burn plan which describes prescription parameters so that acceptable and desired effects are obtained. Smoke produced from prescribed burning is the major air pollutant of concern.

National Ambient Air Quality Standards for PM2.5 have been established to protect human health. Due to the lack of monitoring data for PM2.5 these standards have yet to be implemented. It is estimated that by year 2003 monitoring data for PM2.5 will be completed. When standards are implemented for PM 2.5, all burning proposed within the planning area will comply with these standards.

Administration of Smoke Producing Projects

The operational guidance for the Oregon Smoke Management Program is managed by the Oregon State Forester. The policy of the State Forester is to:

1. Regulate prescribed burning operations on forest land.
2. Achieve strict compliance with the smoke management plan.
3. Minimize emissions from prescribed burning.

For the purpose of maintaining air quality, the State Forester and the Department of Environmental Quality shall approve a plan for the purpose of managing smoke in areas they designate. The authority for the State administration is ORS 477.513(3)(a).

ORS468A.005 through 468A.085 provides the authority to DEQ to establish air quality standards including emission standards for the entire State or an area of the State. Under this authority the State Forester coordinates the administration and operation of the plan. The Forester also issues additional restrictions on prescribed burning in situations where air quality of the entire State or part thereof is, or would likely become adversely affected by smoke.

In compliance with the Oregon Smoke Management Plan, prescribed burning activities on the Medford District require pre-burn registration of all prescribed burn locations with the Oregon State Forester. Registration includes specific location, size of burn, topographic and fuel characteristics. Advisories or restrictions are received from the Forester on a daily basis concerning smoke management and air quality conditions. These advisories or restrictions insure that burning done by the Medford BLM is in compliance with standards set for particulate matter.

2.3.2 Timber Management

Timber harvest would occur on lands within the EIS area to assist in meeting land management objectives. Harvests and subsequent followup treatments would be consistent with management direction and Standards and Guides in the RMP and the Northwest Forest Plan. Timber management on mineral patent lands would be consistent with the management on adjacent federal lands. Timber would be harvested under the auspices of one or more timber sales. If several timber sales, they would occur during the 5-7 years following the Record of Decision.

The actual numbers and sizes of trees for logging is not known at this time. Acres are approximate and unit boundaries have not been finalized. This EIS provides anaylsis on estimated acres, describing effects based on stand conditions, habitat, water quality, etc. if each of the alternatives were implemented.

Standard Project Design Features (PDFs) and management direction would be incorporated into the design of timber harvest, as called for in the RMP (e.g., green tree retention, coarse woody debris retention, restrictions on harvest seasons, protection measures for special status species). In addition, the following PDFs would apply:

Directional Falling

Directional falling toward the lead would be required to minimize damage to residual trees and conifer regeneration in all Overstory Removal (OR), Commercial Thin (CT), and Commercial Density Management (CDM) units. Directional falling away from streams would be required within one tree length of Riparian Reserves.

Yarding

Lateral yarding would be required on all cable-yarded OR, CT, and CDM units. Yarding carriages would be required to maintain a fixed position on the skyline system during lateral yarding. Cable yarding in CT and CDM units would not be allowed between March 1 and June 15 to lessen bark slippage on residual trees. All trees to be cable yarded in OR, CT, and CDM units would be limbed and cut into lengths not to exceed 35 feet prior to yarding to minimize damage to residual trees. Cable yarding lines would be respooled when changing yarding corridors. Overstory Removal units would be required to be yarded within four weeks from commencement of falling operations to minimize damage to the residual stand. Landings would not be located within Riparian Reserves. Tractor yarding would be restricted to designated skid trails.

To lessen the spread of blackstain disease, roadside brushing would be done between June 15 and September 15.

For harvest units with a proposed site preparation treatment of slashing and hand piling, the work would be completed within three months following completion of logging.

Follow-up treatments (outside of timber sales) designed to achieve BLM stocking standards would be conducted on Regeneration Harvest and Overstory Removal harvest units following site preparation or fuels treatment. Treatments may include: tree planting, below ground fertilization (usually concurrent with the planting operation), mulching, shading, tubing, maintenance brushing and release brushing.

Sale or use of Special Forest Products (SFPs) would be allowed throughout the planning area where harvest would not prevent the attainment of land use allocation or Aquatic Conservation Strategy objectives.

Proposed Riparian Reserve widths were calculated based on site potential tree heights measured in each of the timber harvest planning areas and range from 150 to180 feet wide; minimum 300-360 feet on fish-bearing streams. Riparian Reserve width seeps and springs would be 100 feet.

2.3.3 Late-Successional Habitat

Commercial density management treatments within the Late-Successional Reserve would only be implemented in stands less than 80 years of age and would maintain a minimum of 60 percent canopy closure.

In all regeneration or overstory removal harvest units, guidelines for snags and coarse wood would conform to the December 11, 2000 Memorandum of Understanding by the SW Oregon Provincial Interagency Executive Committee (PIEC), which defines levels of snags and downed wood by plant association. As some site conditions seem to preclude achieving the standard levels of downed woody debris, all non-hazardous snags would be retained in all harvest units. If it is necessary to fall snags for safety reasons, they would remain on site as down wood. All naturally occurring dead and down woody debris, greater than or equal to 16 inches dbh, currently present in all units would remain on the site and would not be removed.

Retaining green trees, snags, and large down logs would be emphasized during layout, marking, and timber harvest. Sufficient trees would be marked for retention to allow for losses. If trees, snags, or logs are inadvertently knocked down or disturbed during logging they would be retained on site.

Ponds

Four small ponds or wetlands would be improved to create better conditions for wildlife. The four locations include:

- T 33S, R 9W, sec.11, SW 1/4 of NW 1/4
  This is a small pond adjacent to the road, but not visible due to screening. Road screening would be maintained. Alders would be removed in the area of the small dam, and a small amount of riparian manipulation would occur.

- T 32S, R 8W, sec. 13, NE 1/4 of SW 1/4 (Nine-mile saddle)
  This small spring with a box, below the road, would be improved by excavating it to an approximately 4-foot center depth, tapered towards the edges to provide shallower water habitat and improved wildlife access. A liner would be installed to improve water retention and the road would be improved to facilitate pumper access.

- T 32S, R 8W, sec.31, SE 1/4 of NE 1/4
  This is a borrow pit adjacent to the road, with a spring in the southeast portion of the pit. The pit would be improved to hold water longer by digging it out to approximately a 6-

foot center depth, and tapered toward the edges to provide shallower water and gentler banks. A liner would be installed to hold water for longer periods. The intake and outlets would be screened. Organic material would be hauled in to facilitate vegetative development. Vegetative screening would be placed on the west (road) side of the pit, including alder and maple. The existing 300 feet of road to the east would be barricaded with a berm to prevent motor vehicle access.

- T 33S, R 9W, sec. 4, SE 1/4 of NW 1/4 (Kelsey Pond)
  This pond is currently dry. A liner would be installed to help retain water. At the existing culvert outfall, an approximately 4-foot deep catch-basin would be constructed, with an outfall pipe directed to the pond. The existing pipe below the road would also be cleaned out.

Threatened and Endangered Species

Northern Spotted Owl (threatened)

No treatments would take place in the 100-acre northern spotted owl activity centers because they are managed under the guidelines for Late Successional Reserve. Spotted owl surveys would be conducted in the spring of the year timber sale units are planned to be logged, prior to logging activity, to ensure owls have not moved into the unit. If hatching year (fledgling) spotted owls are known or suspected within or immediately adjacent to a project area, the project activity would be delayed until June 30th or until a biologist determines that young have sufficiently dispersed. In addition, work activities which have the potential to disturb nesting spotted owls, including tree falling, yarding, slashing, burning, road construction and renovation, and use of chain saws or other power equipment, would not take place within 1/4 mile of known spotted owl sites between March 1 - July 1. At a minimum, this would affect the following Units: California Gulch Units 22-1,23-1,26-2,26-3, and 26-4; Meadow Creek Unit 29-1; West Fork Whisky Unit 9-3; Upper East Kelsey Units 1-1,1-2, and 6-5; Mari-Kelsey Units 26A, 26A1, 27-3, and 27-4; and Lower Marial Unit 2-1B. Other units may also be limited depending on survey results. These Project Design Features (PDFs) may be waived in a particular year if nesting or reproductive success surveys conducted according to the Fish and Wildlife Service-endorsed survey guidelines reveal that spotted owls are not nesting or that no young are present that year. Waivers would be valid only until March 1 of the following year. Previously known sites or activity centers would be assumed occupied unless surveys indicate otherwise.

Marbled Murrelet (threatened)

Timber sale units which would remove or degrade suitable marbled murrelet habitat within the sale area and located in Marbled Murrelet Area B (up to ten kilometers east of the hemlock zone) would be surveyed for marbled murrelets to protocol standards (2 years) before the sale is sold. These units include Mari-Kelsey Units 23A1, 26A, 26A1, 27-3, 27-4, and 33-1; and Upper East Kelsey Units 35-1 and 35-2. If occupancy behavior of marbled murrelets is documented during the surveys, reinitiation of formal consultation with the Fish and Wildlife Service would be required, and the site within 1/2 mile would be protected (USDA and USDI 1994, pg.C-10)

Work activities within 1/4 mile of suitable unsurveyed habitat which have the potential to disturb nesting marbled murrelets would have daily operating restrictions from April 1 - August 6, confining operations to between 2 hours after sunrise to 2 hours before sunset.

Bald Eagle (threatened)

The active bald eagle nest located in the Alder Creek drainage would be protected from human disturbance within one-half mile of the nest, consistent with RMP direction. This applies specifically to California Gulch units #27-1A, 27-1B, and 28-1B, in which post-harvest canopy closure would be at least 60%, and no co-dominant or dominant conifer trees would be removed. There would be no new road construction in these units. No project activities, including prescribed fire, would occur from February 1 - August 15 within one-half mile of the nest.

Survey and Manage and special status species

Protocols for species protection are evolving. Placement of buffers is current policy for BLM actions to maintain species viability. The actions proposed in this EIS would be implemented in accordance with approved Management Recommendation and/or in accordance with approved policy and planning documents at the time of the action. Pre-disturbance clearance surveys would be conducted for Survey and Manage and special status species according to protocols before any decision is made concerning implementation of any ground disturbing activities. Known sites would be managed and protected according to the approved Regional Ecosystem Office management recommendations. All active raptor nests would all be protected as specified in the February 8, 1999 Instruction Memorandum No. OR-99-036.

Protection measures for Bureau Tracking species would be determined on a site-by-site basis. Sites could be underburned outside of the growing season.

Red Tree Vole (Survey and Manage)

The current guidance requires all active Oregon red tree vole sites, either individual nest trees, or a collection of active and inactive nest trees within 100 meters of an active nest tree, receive a 10-acre minimum no-cut buffer, or a minimum one acre per nest tree, whichever is greater. Due to susceptibility to heat and smoke which penetrates tree crowns, burning of hand-piled material is required to not occur within 50 feet of red tree vole nest trees.

Great Gray Owl (Survey and Manage)

Current guidance requires that if a great gray owl nest site were to be detected, a 1/4 mile no-cut buffer would be established around the known nest site.

Northern Goshawk (Bureau of Land Management Sensitive)

If a northern goshawk nest is located, it would be protected with a 30 acre nest core area and no activity would be allowed within 1/4 mile from March 1 - July 30, or until a biologist has determined that nesting is not occurring or that the juveniles have sufficiently dispersed.

Peregrine Falcon (Bureau of Land Management Sensitive)

Peregrine falcons would be protected from human disturbance, including disturbance from prescribed fire activities in California Gulch Unit #2-2, from Feb. 1-Aug. 15.

Vascular Plants, Lichens and Bryophytes

Pre-disturbance surveys would be conducted for Survey and Manage Categories A and C, and Bureau special status lichens, bryophytes and vascular plants. No fungi surveys are required in this planning area. Survey and Manage, Bureau Sensitive and Bureau Assessment species plant sites would be protected in accordance with approved management recommendations and/or in accordance with approved policy and planning documents. Although Bureau Sensitive species require protection, Bureau assessment species do not. Thus, protection measures for measures for Bureau assessment species will be considered on a site by site basis. Bureau Tracking species do not require mitigation. For species receiving protection, current guidance is to retain vegetation in no-cut buffers which would be at least 100 feet wide with 200-foot buffers in regeneration and overstory removal units that would retain less than 40 percent canopy cover. The objective would be to maintain adequate micro-climatic conditions to allow the plant populations to persist.

Special status species existing in fuels units may be included in the burn as experimental sites. Anecdotal evidence suggests species such as Bolander's onion (BTO) and Howell's camas (BSO) which occur in dry open habitats, are not adversely affected by fire. These sites would be monitored on a bi-yearly basis, to document regeneration and/or extirpation rates. Experimental sites within pile and burn fuels units would have smaller piles to decrease heat intensity. If piling near a site, buffer size would be reduced to 5 or 10 feet in width to protect

the plant site from direct heat for Bureau Assessment and Bureau Tracking species.

2.3.4 Roads/Transportation System

Routine road maintenance would continue to occur across the Kelsey Whisky Landscape Planning Area, depending on needs and available funding.

Logging, burning and other activities would be designed and implemented so that traffic on the Mt. Reuben and Marial roads would not be blocked for more than 30 minutes at a time. This road system does provide access to private lands above the Rogue River and that access would not be altered; the land owners would continue to have access to their lands through the gates. Local residents would be notified of any planned activities which might restrict or interfere with access to their property.See Section 2.3.6 for seasons for hauling.

Any work performed in stream channels would be accomplished between July 1 and September 15 of the same year, in accordance with Oregon Department of Fish and Wildlife guidelines. The work period for decommissioning road surfaces would be limited to July 1 to October 15 of the same year. Where practical, stream flows would be diverted around existing culvert replacements so that the construction sites remain de-watered; and would not be returned through the project area until all instream work has been completed to minimize stream sedimentation.

Existing culverts excavated from the road prism would be disposed of in accordance with State and County regulations. Excavated side slopes where culverts are permanently removed would be laid back to at least a 1 1/2:1 slope, to reduce erosion potential. The width of the bottom of the excavation would match the width of the bank-full stream channel. Excess excavated material generated from this work would either be spread in stable locations within the existing road prism or hauled to a stable designated waste disposal area where sediment would not enter stream channels. Buried logs and other debris from culvert excavation would be placed in designated disposal areas.

Partial rather than total decommissioning may be more appropriate where vegetation on the road surface is well-established, the surface is not eroding and ripping could reinitiate erosion. In such a situation, existing culverts would be removed and the road water barred and barricaded. Where full decommissioning is appropriate, discontinuously sub-soil the road surface and water bar to prevent longitudinal erosion of the road bed. Water bars would be constructed at the same time as ripping. Sub-soiling would be done with a winged ripper (24" tines) at least 18" deep and 36” apart to provide at least 70 percent fracture of the compacted roadway material.

Equipment refueling would be done where there is minimal chance that toxic materials could enter a stream. Equipment would not be stored in a stream channel overnight. Hydraulic fluid and fuel lines would be in proper working condition in order to minimize leakage into streams. Heavy equipment would be washed off before entering federal lands. This would be to minimize spread of noxious weeds and disease into the project area.

Cutting vegetation on road fill slopes would be minimized in order to maintain slope stability and shading. Work would be temporarily suspended if monitoring indicates that rain storms have saturated soils to the extent that there is potential for causing excessive stream sedimentation. Mulching would be done immediately after excavation or ripping to reduce erosion. Decommissioned and barricaded roads would be open to non-motorized use, such as foot traffic, bicycles and horses.

The normal work period for quarry operations would be June 15 to October 15 of the same year, to minimize potential for generating sediment that could enter streams. Standard measures would be taken to capture sediment before it reaches streams if quarry work must be done outside the preferred work period. Waste diesel, oil, hydraulic fluid and other hazardous materials would be removed from the site and disposed of at an approved landfill.

All soil disturbance associated with road drainage improvement and culvert installation/ replacement would be within the existing road rights-of-way, with moderate to small excavations and fills. Alder and other vegetation would be cut in ditch lines to ensure proper road drainage. Ditch lines would be pulled and cleared of obstructions where identified in the contract. Energy dispersal pads would be placed at culvert outlets where necessary to reduce potential for soil erosion.

2.3.5 Forest Health

Proposals for vegetation treatments designed to promote forest health include a wide range of practices which overlap considerably with management actions primarily designed for timber harvest, fuels reduction or wildlife habitat enhancement. Forest health proposals are designed to:

- restore naturally functioning forest systems,
- reduce the risk of large-scale insect and disease damage brought on by abnormally dense stands
  resulting from past attempts of fire exclusion,
- promote native plant populations and communities, such as the open pine stands, meadows and
  serpentine openings which are being crowded out by dense stands of young Douglas-fir, white fir, and
- restore Douglas-fir stands to areas in the Quail Creek burn which were planted with ponderosa pine.

In addition to the use of timber sales to meet forest health objectives, non-commercial treatments would also be conducted. Non-commercial density management treatments would include girdling or thinning young conifers and hardwoods and disposing of the slash where necessary, by either underburning, hand-piling and burning, or through lopping and scattering. This non-commercial treatment would often extend into the Riparian Reserves, but not within 25 feet of a stream.

Treatments designed to improve forest health within the California Gulch area would occur under all action alternatives.

Treatments to improve vigor and maintain large pines (both sugar and ponderosa) in the West Fork Whisky Creek subwatershed would occur under all action alternatives.

Approximately 221 acres of the Quail Creek burn would be treated to begin to move the area back to a more natural Douglas-fir community from the current unnatural, dense ponderosa pine stands resulting from planting after the fire (units 2-1, 2-1A and 2-3). The treatment would consist of thinning the pine stands to allow for release of existing Douglas-fir trees and in areas to allow for the planting of Douglas-fir seedlings where none exists. Over most of the area, the pines are too small for a commercial product or yarding would not be economically feasible. In this situation, the pines would either be cut or they would be girdled and left standing. Hand piling of slash followed by burning of piles would occur. This treatment would be the initial in a series of treatments that would occur over the next several decades that would gradually move the stand to one dominated by Douglas-fir. Subsequent treatments would receive their own environmental analysis. See Appendix 13 for Silviculture Prescription which describes details of treatments.

2.3.6 Soils and Watershed

Temporary roads would be constructed to minimum width necessary for safe operations. After site preparation is accomplished the road would be obliterated and planted back to conifer species suited for the site. Ground which is disturbed during road construction and decommissioning would be mulched prior to the onset of fall rains. Construction of temporary roads would occur only between May 15 and October 15 of the same calender year to minimize erosion.

When replacing bottom-lay culverts (stream channels) streams would be diverted around the work site whenever reasonably feasible in order to limit movement of sediment off-site during the low flow period. The diverted stream would not be returned to the channel and allowed to flow through the project site until all in-stream work has been completed.

Road renovation and maintenance on natural surface roads would be restricted to the dates prescribed for hauling. If the roads are deemed too wet (road surfaces are deforming and road damage or sediment production is likely) during a designated haul season (inclusive of the start and end dates), hauling would not be allowed until approved by the Field Manager.

To prevent damage to roads and potential for stream sedimentation, log or rock hauling would only be allowed during the following periods:

Paved roads	-	All year
Rocked roads	-	April 15 to November 15
Native surface roads	-	May 15 to October 15
New construction	-	May 15 to October 15

Helicopter landings would be constructed and used in the same season. The landings would be ripped following logging and planted. The helicopter landings would only be rocked if it is necessary to prevent erosion and movement of sedimentation to streams. All landings which are used for timber harvest would be ripped and mulched and planted with conifers following harvest.

In all tractor yarding units, tractor blades would not be used. This provision would ensure minimal soil displacement and would help to retain the organic material on site. Where tractors are used for yarding, existing skid roads would be used if present. Skid roads used in this timber sale would be discontinuously ripped and water-barred to reduce erosion. Water bars would be installed at the same time as ripping.

All activities within the planning area would conform to the Aquatic Conservation Strategy as outlined in the Northwest Forest Plan (Appendix 11).

Broadcast burning and underburning would be done under spring-like conditions to minimize the loss of soil organic material and minimize damage to reserve trees.

Heavy equipment would be washed before moving into the project area to remove soil and plant parts to prevent the spread of noxious weeds into the project area.

2.3.7 Land Acquisition

Land acquisitions resulting in land tenure adjustments for all land use allocations would occur when opportunities to conserve biological diversity or to promote land management on federal land exist. BLM ownership in the planning area would be consolidated, where possible, to improve management of all natural resources. Land would be acquired only from willing owners. Newly acquired lands would be designated the same as the adjacent land use allocation (USDI 1995, pg. 98).

2.3.8 Cultural Resources

All sites found during the cultural resource survey were flagged during the survey process. The BLM would protect each site. Cultural sites would be rechecked for flagging prior to any activity. If actions were to impact a cultural site, the BLM would mitigate the impacts through excavations, testing or avoidance. An archaeologist would be onsite during operations for culturally sensitive sites where activity can occur.

To mitigate possible damage or impact to cultural sites the following measures would be followed in areas of timber and silviculture management activities. Archaeological sites would be protected by the following methods or combinations thereof:

- Complete site avoidance would be accomplished in most circumstances. If complete avoidance is not possible, known archaeological sites would be flagged prior to project implementation with a buffer area and the contract administrator would be advised.
- In timber units a buffer area would be delineated and direction falling of timber away from the site center area would be employed.
- Skid trails through the site would not be permitted.
- No landings would be constructed where known archaeological sites exist.
- In the case of a linear archaeological site, such as a historic trail or railroad grade, logging equipment would not be permitted to use these areas for operation.

Archaeological site protection measures that apply to all Kelsey Whisky fuels treatments include the following:

- All buffer areas would be designated using black/orange striped flagging prior to project implementation to delineate a no-entry area.
- Fuels treatments such as slashbuster would receive protection measures that consist of a flagged buffer area where all hand piles would not be permitted inside the buffered area.
- All hand piles would be pulled back 10-15 feet from the flagged buffer area.
- All railroad grades and historic trail segments would be designated with flagging and all machinery, including slashbuster, would be kept off these areas.
- Change a part of the fire prescription to further buffer the site - for example hand pile and burn a minimum of 25 feet away from the structures with in a site, and then the prescribed fuels treatment. This could lessen the fuel load near the cultural resource site and offer the site more protection.
- Historic mine adits or shafts that are determined to be a safety hazard, would be grated for safety reasons.

2.4 Alternative 1

This section presents management actions specific to alternative 1. As noted above, the following issues provide a focus for environmental analysis and a basis for resulting decisions.

a) Fire and Fuels
b) Timber Management
c) Late-Successional Habitat
d) Roads/Transportation System

Alternative 1 (Map 4) would implement timber sales, fuels treatments, road management actions, wildlife pond enhancements and some other management actions under the existing guidance in the RMP. No changes to land use allocations would be made. In comparison to any of the alternatives, this alternative would provide the highest level of commercial timber and other commodities, consistent with the RMP and the Northwest Forest Plan.

2.4.1 Fire and Fuels (Alt. 1)

Approximately 3,265 acres of high risk and high hazard fuels would be treated to reduce the potential for major wildfires (Map 4). The objectives would be to reduce the potential for a human-caused fire to start (risk) as well as reduce the intensity and rate of spread of a wildfire if one did get started (hazard). The highest priorities for fuels treatments are along major travel routes and ridges. Treatment of these high risk and hazard areas offer the greatest potential for altering fire behavior. This change in fire behavior greatly increases the chance that direct suppression measures would be successful in the event of a wildfire. An increased

opportunity for suppression would decrease the total amount of acres burned and decrease the percentage of acres burned in a high intensity fire. Additional high risk and hazard areas have been identified where private land (the wildland-urban interface) meets federal lands as well as on southern exposures where fuels may pose an additional risk and hazard for fire spread and intensity.

Of the approximate 3,265 acres identified for non-commercial fuels treatments, roughly 1,847 acres would receive manual treatments (slashing, hand piling, hand pile burning). Mechanical treatments (slashbuster) would be applied to approximately 289 acres. In addition, approximately 1,129 acres of older stands would be underburned to reduce fuel loadings and remove ladder fuels. In the latter situation, hand fire lines would be constructed where necessary for control. Underburns would normally occur in the spring when prescribed burning is most likely to successfully meet objectives while minimizing the risk of escapement. A more detailed description of proposed fuels treatments can be found in Appendix 5.

Commercial thinning and density management treatments would also be conducted in some of the conifer stands throughout the project area. Fuels treatments would occur on approximately 2,687 acres within the commercial treatments. Approximately 1,829 acres would receive manual treatments (slashing, hand piling, hand pile burning) and 807 acres would be underburned or broadcast burned. These treatment areas are identified on Map 4 and are considered as part of the timber harvest proposal in the GFMA or wildlife habitat enhancement proposal in the LSR.

Full wildfire suppression strategy would continue to be used throughout the area under this alternative. When a wildfire is detected, all available resources might be used to suppress the fire, including hand crews, tractors, helicopters and retardant tankers. This is consistent with the current management direction for this area.

The treatments would be tailored to individual site conditions, but would generally consist of slashing brush and saplings, hand-piling and burning the piles. In some cases, dense stands of small conifers would be thinned to space out the stems and reduce the chance of crown fires. More details of the proposed fuel treatments can be found in Appendix 5.

Commercial thinning (CT) and density management treatments (CDM) would also be conducted in some of these areas along major travel routes which could help meet some of the fuels objectives. In these cases, the CT areas displayed on Map 4 would be considered part of the timber harvest proposal in the General Forest Management Area (GFMA), and CDM also displayed on Map 4 would be considered part of the wildlife habitat enhancement proposal in the late-successional reserve (LSR).

2.4.2 Timber Management (Alt.1)

Timber harvest would involve approximately 531 acres of regeneration harvest, including overstory removal, and 930 acres of commercial thinning (Table 2 -1, Map 4). Timber harvest would result in approximately 9,750-11,950 MBF.

In units 2-1, 2-1A and 2-3 treatment would consist of thinning the pine stands to allow for release of existing Douglas-fir trees and in areas to allow for the planting of Douglas-fir seedlings where none exists. In some areas the ponderosa pines are large enough to yield a commercial product. These areas are primarily in the western part of the unit. Under this alternative approximately 20 acres of commercial density management would occur and approximately 10 MBF would be harvested.

2.4.3 Late-Successional Habitat (Alt.1)

Under the management direction of the RMP and the Standards and Guidelines (S&G) of the Northwest Forest Plan, commercial thinning within LSRs would be undertaken when the objective is to promote the retention or enhancement of late-successional forest habitat

characteristics or to reduce the risk of catastrophic wildfire. Under this alternative, 328 acres of commercial density management would occur within the current LSR in stands younger than 80 years old. In these cases, the objectives would include increasing the diameter growth of residual trees to promote development of larger diameter trees, snags and coarse woody debris, reducing competitive stress to larger diameter trees, and reduce fuel ladders.

The underburns and fuels treatments within the LSR would be designed to be consistent with LSR management direction in the NFP ROD, the RMP and the Southwest Oregon LSR Assessment. In these cases, the primary objective of the treatments in the LSR is to prevent future large scale, intense wildland fires which would remove late-successional habitat.

2.4.4 Roads/Transportation System (Alt.1)

The existing road system would be maintained to provide access for management and for public use and currently includes over 230 miles in the northern part of the watershed. (see Table 3-1). Existing gates and barricades would be maintained. In addition, 1.5 miles of temporary roads would be constructed for timber harvest. The temporary roads would be barricaded and decommissioned immediately following harvest and prescribed burning.

Approximately 7.1 miles of primitive roads would be renovated and upgraded to provide fire suppression access.

Approximately 9.7 miles of existing roads would be fully decommissioned and closed to motor vehicle use. Full decommissioning would involve discontinuous ripping of the road bed, removing culverts, and stabilizing the surface. A total of two gates and one barricade would be installed to close approximately 6.9 miles of existing roads to public motor vehicle use. These action are designed to minimize the amount of soil that moves off site.

2.4.5 Forest Health (Alt.1)

In Alternative 1, forest health treatments would involve approximately 328 acres of commercial density management and commercial/non-commercial density management treatments. As a by-product of these treatments approximately 700-850 MBF of timber would be removed from forest stands. There would be approximately 181 acres of non-commercial density management treatments in which there would be no commercial by-product. This type of treatment would involve girdling or thinning young conifers and hardwoods and disposing of the slash by either underburning, hand-piling and burning, or through lopping and scattering. This non-commercial treatment would often extend down into Riparian Reserves, but no density management would occur within 25 feet of a stream.

Proposed forest health treatments are listed in Table 2-1 under “Treatments designed to meet Non-Timber Objectives (wildlife habitat, forest health, fuels) and are displayed on Map 4.

Broad areas within the West Fork Whisky Creek subwatershed would be treated to enhance and maintain the large pines in the area. Many of the larger pines in this subwatershed have died in the last two decades due to drought conditions and stress brought on by dense stands around them. The treatments would involve localized thinning around selected pine trees as well as the creation of small openings (i.e., less 1/4 acre) around other pines or groups of pines to reduce stress from competition. Openings would also create the opportunity for natural pine regeneration to become established. Since the purpose of the treatment would be to maintain a healthy pine component within watershed, treatment would occur around larger pine as well as those that would be able to grow into larger diameter classes. This treatment would occur throughout all land use allocations within the watershed except the 100-acre owl core area, and would be limited to no more than two openings per acre. Within Riparian Reserves openings would be created only within the outer half of the reserve. Riparian Reserves for fish stream would be 360 ft and for nonfish streams 180 ft. The size of created openings would be limited to that created by cutting competitive vegetation under the leave pine and to a distance of up to fifteen feet beyond the drip line. Openings would also be no closer than 300 feet from other created openings in the Riparian Reserve and no merchantable trees would leave the site. If merchantable trees are cut they would be left on the site to

provide coarse woody debris if it were not judged to be a potential fuels/fire problem. Slash from the treatment would be lopped and scattered and would not be over three foot in depth. Slash would be pulled back at least 25 feet from the boles of leave trees. In this alternative, salvage of dead conifers in excess of those needed for wildlife and coarse woody debris recruitment would occur. A major part of the salvage operations would occur along ridges and other areas prone to lightening strikes. The treatments would occur in an area of approximately 1,091 acres, primarily in the upper 1/3 of the subwatershed and would result in an estimated 650 MBF being removed from the site as a by-product of the treatment.

Riparian shrub and hardwood vegetation within units 6-3, 6-3R1, 6-3R2, and 6-3R3 would be slashed to within 25 feet of streams and would be broadcast-burned concurrently with the site preparation within harvest portions of the unit. The purpose of this proposed treatment is to reduce competing non-conifer vegetation and allow an understory of conifers to develop. Underplanting of these riparian units would occur along with Unit 6-3. Fire lines would not be constructed within the Riparian Reserves. The broadcast burn would be allowed to burn slowly within the Riparian Reserves but would not be initiated within 50 feet of streams.

Commercial density management treatment within LSRs would retain an overall canopy cover of 60 percent. Treatment would retain dominant, codominant, and intermediate conifers necessary for desired stand structure. The pine conversion treatment in unit 2-3 would allow removal of approximately ten thousand board feet of small diameter (8-14” dbh) ponderosa pine.

2.5 Alternative 2

This section presents specific management actions to alternative 2. As noted above, the following key issues provide a focus for environmental analysis and a basis for resulting decisions.

Key Issues:

a) Fire and Fuels
b) Timber Management
c) Late-Successional Habitat
d) Roads/Transportation System

2.5.1 Fire and Fuels (Alt.2)

The management direction for fuels treatments and fire suppression are the same in alternative 2 as they would be under alternative 1 with some changes in the amount of commercial and non-commercial acres treated.

Under Alternative 2, a total of approximately 3,241 acres of high risk and high hazard fuels would be treated. Of the approximate 3,241 acres identified for fuels treatments, roughly 1,823 acres would receive manual treatments (slashing, hand piling, hand pile burning). Mechanical treatments (slashbuster) would be applied to approximately 302 acres. In addition, approximately 1,129 acres of older stands would be underburned.

Fuels treatments would occur on approximately 2,542 acres within the commercial treatments. Approximately 1,751 acres would receive manual treatments (slashing, hand piling, hand pile burning) while approximately 51 acres would receive mechanical treatments. In addition, 261 acres would be underburned or broadcast burned.

Additionally, all treated units in the Kelsey Whisky Planning Area (commerical and non-commerical) would be evaluated to determine if maintenance treatments are warranted. Typically, maintenance underburns would be performed in all treated units on a rotation of 5-7 years. The goal of the underburns would be to further reduce slash loadings, reduce brush and other understory vegetation which would act as ladder fuels and promote the growth of existing and new trees. Plantations and areas of second growth located throughout the planning area have also been identified for non-commerical fuels reduction treatments. New

plantations created following harvest activities would pose a higher level of risk and hazard than mature timbered stands. However, the total number of acres represented by plantations would be a small percentage compared to the total number of acres receiving hazardous fuel treatments. In addition, plantations would be maintained in the future through brushing and thinning activities, followed by slash reduction treatments.

Fire suppression in the proposed East Fork Whisky Creek Area of Critical Environmental Concern (ACEC) would be done with limited use of mechanized equipment such as dozers or tractor lines. Heavy equipment would stay primarily on existing ridge roads. Approximately 10 acres on the northwestern ridge line adjacent to existing ridge road would be treated for fuels to reduce the chance of fire in the ACEC.

2.5.2 Timber Management (Alt 2)

Some adjustments to timber harvest activity would occur, primarily changing some cable yarding under alternative 1 to helicopter yarding, and deferring some harvest units. Additional emphasis would be placed on providing a higher level of connectivity for wildlife species associated with late-successional forest habitat compared with alternative 1 by modifying timber harvest activity in the northeast portion of the planning area. Timber harvest would involve approximately 355 acres of regeneration harvest, including overstory removal, and 969 acres of commercial thinning (Table 2 - 1, Map 5). Timber harvest would result in approximately 7,350-8,950 MBF.

The volume projected for alternative 2 is lower than for alternative 1, primarily for two reasons. First, permanent roads would not be constructed, so harvest plans for some units would be altered. Changing from cable yarding to helicopter yarding is one option, but this has other implications, including making site preparation (especially broadcast burning) more difficult or expensive, or increasing the cost of future management, such as planting, surveying, brushing and pre-commercial thinning. For these reasons, some proposed units were deferred in this alternative. Second, the proposed timber sales in the northeast portion of the EIS area would be modified to provide a higher level of connectivity for species associated with late-successional forest habitat than would be provided by alternative 1. In some cases potential units proposed in alternative 1 would be deferred under this alternative. In others, units which were proposed to be regeneration harvested in alternative 1 would receive a lighter harvest, retaining more of the forest canopy and structure. This would not be a permanent designation, the area would still remain as GFMA and would be subject to intensive timber management in the future. But it would help maintain connectivity to the east and north in the short term more than would alternative 1. Alternative 2 was designed as an intermediate approach to providing connectivity, at least in the short term.

2.5.3 Late-successional Habitat (Alt. 2)

Under alternative 2, an equal number of acres of commercial density management would be done within the LSR as under alternative 1. Approximately 329 acres would be treated.

2.5.4 Roads/Transportation System (Alt.2)

The existing road system would be maintained to provide access for management and for public use in accordance with the management direction of the RMP. Existing gates and barricades would be maintained. There would be no new permanent road construction. Approximately 1.9 miles of temporary roads would be constructed for timber harvest; these would be barricaded and ripped immediately following harvest and prescribed burning (Table 2-1).

Existing jeep roads would not be renovated and upgraded to provide fire suppression access, but would be maintained in their current condition.

Approximately 9.7 miles of existing roads would be fully decommissioned. A total of two gates and one barricade would be installed to close approximately 6.9 miles of existing roads to public motor vehicle use.

Proposed Area of Critical Environmental Concern

Road maintenance on any of the roads within or bordering the proposed ACEC should not utilize exotic species for road stabilization projects. Culverts and water ditches on these roads should be checked as frequently as possible to avoid excess runoff during storms.

2.5.5 Forest Health (Alt.2)

In alternative 2, forest health treatments would involve approximately 329 acres of commercial density management and commercial/non-commercial density management treatments. As a by-product of these treatments, approximately 700-850 MBF of timber would be removed. There would be approximately 181 acres of non-commercial density management treatments in which there would be no commercial by-product. This type of treatment would involve girdling or thinning young conifers and hardwoods and disposing of the slash by either underburning, hand-piling and burning, or through lopping and scattering. This non-commercial treatment would often extend down into Riparian Reserves, but no density management would occur within 25 feet of a stream.

Proposed forest health treatments listed in Table 2-1 under “Treatments designed to meet Non-Timber Objectives (wildlife habitat, forest health, fuels) and are displayed on Map 5.

The pine enhancement and maintenance treatments in the West Fork Whisky Creek subwatershed described under alternative 1 would also occur under this alternative. Treatment in this alternative would be similar to that in Alternative 1 only there would be no salvage of excess conifer snags. Approximately 550-650 MBF of commercial timber would result from this treatment.

Commercial density management treatments in the California Gulch area would retain an overall canopy cover of at least 60 percent; similar treatments within LSRs, and within the connectivity area in the North Fork Kelsey Creek subwatershed would retain an overall canopy cover of at least 60 percent. Treatments would retain dominant, codominant, and intermediate conifers necessary for desired stand structure. Trees larger than 11 inches dbh in LSR units would be retained.

2.6 Alternative 3 (No Action)

This section presents specific management actions to alternative 3. As noted above, the following issues provide a focus for environmental analysis and a basis for resulting decisions.

Key Issues:

a) Fire and Fuels
b) Timber Management
c) Late-Successional Habitat
d) Roads/Transportation System

The No Action Alternative would allow for routine management actions to occur within the EIS area in accordance with established RMP guidelines. The actions as proposed under alternatives 1, 2, and 4 would not proceed as described. Any future proposals would undergo analysis in compliance with the National Environmental Policy Act (NEPA).

2.6.1 Fire and Fuels (Alt. 3)

Fire suppression activities would continue under current direction, which calls for full suppression throughout the EIS area. Minor brushing around structures and other facilities would continue to occur. Hand-piling treatments would also continue to occur if they are covered by categorical exclusions. Major fuels management treatment including commercial thinning, slashing, underburns and mechanical treatments would not occur under this alternative.

2.6.2 Timber Management (Alt.3)

No scheduled timber sales would be implemented under this alternative. Future timber sales would be expected to occur at some point since portions of the area are designated as General Forest Management Area, but they would be analyzed under separate NEPA documents.

Small salvage sales of individual cull trees, danger trees and down logs would continue to occur using current management direction covered by a categorical exclusion under NEPA. Larger scale salvage sales would require additional NEPA analysis.

2.6.3 Late-successional Habitat (Alt. 3)

The commercial thinning and the enhancement proposals for wetlands, ponds and springs would not occur under this alternative.

2.6.4 Roads/Transportation System (Alt.3)

The existing system of roads and trails would be maintained using current management practices in compliance with the RMP. This would include routine road maintenance, roadside brushing, cleaning culvert catch basins, road repair following slides and flood damage, removing fallen trees, and other actions not requiring an EA or EIS.

2.6.5 Forest Health (Alt. 3)

The treatments in stands proposed in the other alternatives would not occur under this alternative. Similarly, the pine conversion proposed for the Quail Creek burn would not occur without further NEPA analysis. Stand enhancement activities such as brushing and pre-commercial thinning in existing harvested units may be covered by categorical exclusions and would continue to occur under this alternative.

2.7 Alternative 4

This section presents management actions specific to alternative 4. As described above, the following issues provide a focus for environmental analysis and a basis for resulting decisions.

Key Issues:

a) Fire and Fuels
b) Timber Management
c) Late-Successional Habitat
d) Roads/Transportation System

Alternative 4 (Map 6) was designed to emphasize protection of non-commercial resources while still providing some level of commercial commodities. Timber harvest would be implemented only where needed to promote future growth of existing forest stands, forest health, wildlife habitat or fuels management. No regeneration harvest is proposed for this entry. No new roads, either permanent or temporary, would be constructed. An ACEC would be designated in the East Fork Whisky Creek subwatershed (Map A10-1 & Appendix 10). This ACEC would encompass approximately 2,843 acres, with management as described under alternative 2.

East Fork Whisky Creek Area of Critical Environmental Concern

Under Alternative 4 (Map 6), an Area of Critical Environmental Concern (ACEC) (Map 7) would be designated in the East Fork Whisky Creek subwatershed (Map 8 see Chapter 3). This ACEC would encompass approximately 2,844 acres and would include some lands currently designated both as GFMA and as LSR. This ACEC would be designated to maintain old growth forest habitat, undeveloped character, unique geology and soils, and high water quality. If an RNA is designated, it would protect the 91 acre tanoak / Douglas-fir / salal / evergreen huckleberry plant group which is not currently under the Oregon Natural Heritage Plan. The ACEC would be designated as not available for scheduled timber harvest. Timber harvest would occur only as a component of an approved research project. Hazard trees would not be knocked or cut down except in an emergency situation. Downed trees would not be removed from the site. Any trees cut for trail construction would remain on site. Firewood gathering would be prohibited. Management projects outside the East Fork Whisky Creek subwatershed should be designed to reduce adverse affects to the subwatershed, such as feathering edges of cuts to avoid straight boundaries, using seed source from natural areas, and timing cuts and educating operators to reduce adverse effects to the subwatershed as necessary.

A management plan has been developed for this proposed ACEC and is presented in Appendix 10 for review and comment. This management plan would be implemented if an ACEC were to be designated. Portions of the management plan are incorporated throughout this document. Its primary components are included below. As an ACEC, road construction would not occur and most logging would be prohibited. Active timber management would be limited to stand establishment and manipulation in previously harvested areas and treatments that directly support the values of the ACEC. Fire suppression would be done with limited use of mechanized equipment such as dozers or tractor lines. Heavy equipment would stay primarily on existing ridge roads. Approximately 10 acres on the northwestern ridge line adjacent to existing ridge road would be treated for fuels to reduce the chance of fire in the ACEC.

Area of Critical Environmental Concern Monitoring Plan

Goals and Objectives: Monitoring is a procedure to gauge, check, track, or test for specified purposes. It provides information by which management actions may be evaluated and reported to others. Monitoring adds to the biological information, enhances our knowledge about the interrelationships of various physical and biological variables, and thus increases our ability to manage effectively. This plan would establish a monitoring plan to comply with the RMP and budget constraints as follows:

1. Identify baseline species and plant associations needs for the ACEC,
2. Establish specific monitoring objectives,
3. Identify monitoring time frames and consistent standardized procedures,
4. Interpret monitoring results relative to the baseline information as well as monitoring and implementation objectives.

Types of Monitoring: Ecological status monitoring would be conducted in the East Fork Whisky Creek ACEC. This monitoring would employ temporal/spatial analysis with aerial

photos at 5 –10 year intervals and/or field verification of spatial change—Area botanist, silviculturist, fire ecologist would conduct such monitoring.

a. RNA plant cell for changes over time if an RNA is designated.
b. ACEC for forest pests and diseases
c. effects of wild fire should it occur
d. for spread of noxious weeds
This monitoring would employ annual roadside survey along perimeter roads.

2.7.1 Fire and Fuels (Alt.4)

The management direction for fuels treatments and fire suppression are the same in Alternative 4 as they would be under Alternative 1. However, there would be some changes in the amount of commercial and non-commercial acres treated.

Under Alternative 4, a total of approximately 3,215 acres of high risk and high hazard fuels would be treated. Of the approximate 3,215 acres identified for fuels treatments, roughly 1,784 acres would receive manual treatments (slashing, hand piling, hand pile burning). Mechanical treatments (slashbuster) would be applied to approximately 302 acres. In addition, approximately 1,129 acres of older stands would be underburned.

Fuels treatments would occur on approximately 1,971 acres within the commercial treatments. Approximately 1,659 acres would receive manual treatments (slashing, hand piling, hand pile burning) while approximately 51 acres would receive mechanical treatments. In addition, 261 acres would be underburned or broadcast burned.

Fire suppression would be done with limited use of mechanized equipment such as dozers or tractor lines. Heavy equipment would stay primarily on existing ridge roads. Approximately 10 acres on the northwestern ridge line adjacent to existing ridge road would be treated for fuels to reduce the chance of fire in the ACEC.

2.7.2 Timber Management (Alt.4)

Under this alternative no regeneration harvest or overstory removal harvest would be implemented. Timber harvest on the modified GFMA would consist of approximately 955 acres of commercial thinnings designed to increase growth and yield (Table 2 - 1, Map 6). Timber harvest would result in approximately 3,150-3,850 MBF of merchantable timber volume.

2.7.3 Late-Successional Habitat (Alt.4)

Under the management direction of the RMP and the standards and guidelines of the Northwest Forest Plan, commercial thinning within LSRs is to be undertaken when the objective is to promote the retention or enhancement of late-successional forest habitat characteristics. Under this alternative, 328 acres of commercial density management would occur within the LSR, resulting in approximately 768 MBF.

2.7.4 Roads/Transportation System (Alt.4)

Approximately 13.6 miles of existing roads and unimproved roads would be decommissioned. Two gates would be installed to close approximately 9.2 miles of existing roads to public motor vehicle use. Existing jeep roads would not be maintained, renovated or upgraded to provide fire suppression access. The roads would be allowed to become overgrown with brush and trees.

2.7.5 Forest Health (Alt.4)

In alternative 4, forest health treatments would involve approximately 328 acres of commercial density management and commercial/non-commercial density management treatments. As a by-product of these treatments approximately 700-850 MBF of timber would be removed. There would be approximately 181 acres of non-commercial density management treatments in which there would be no commercial by-product. This type of treatment would involve girdling or thinning young conifers and hardwoods and disposing of the slash by either underburning, hand-piling and burning, or through lopping and scattering. This non-commercial treatment would often extend down into Riparian Reserves, but no density management would occur within 25 feet of a stream.

Proposed forest health treatments listed in Table 2-1 under "Treatments designed to meet Non-Timber Objectives (wildlife habitat, forest health, fuels) and are displayed on Map 6.

The pine enhancement and maintenance treatments in the West Fork Whisky Creek subwatershed, described under alternative 1, would also occur under this alternative. Treatment would be similar to that in alternative 1 except there would be no salvage of excess conifer snags. Approximately 550-700 MBF would result from this treatment.

Commercial density management treatment in the California Gulch and LSR units would retain an overall canopy cover of 60 percent. Treatment would retain dominant, codominant, and intermediate conifers necessary for desired stand structure. Trees larger than 11 inches dbh would be retained.