DECISION NOTICE
and
FINDING OF NO SIGNIFICANT IMPACT

for the

Bridge Creek and Buck Creek Subwatersheds Restoration Project Environmental Assessment

and

Forest Plan Amendment #29

USDA Forest Service - Pacific Northwest Region
Fremont-Winema National Forests
Silver Lake Ranger District
Lake County, Oregon

SUMMARY
I have decided to implement approximately 11,322 acres of vegetative treatments, including 6,859 acres of commercial timber harvest from Alternative 3 in the Bridge Creek and Buck Creek Subwatersheds Restoration Project Environmental Assessment. The project will sometimes be referred to as the "Bridge/Buck Project" in this document. The selected actions will be referred to as "Modified Alternative 3."

My decision includes actions designed to increase the resiliency of the area to withstand severe, uncharacteristic fires, as well to improve growth and protect stands from insects and disease. The proposals also are designed to provide wildlife habitat for a wide diversity of species, enhance riparian-dependent resource values, improve vegetative diversity, and provide forest products.

During the past century, many forests in the interior West have been transformed. In the project area, the vegetation transformation is characterized by forests changing from generally open stands that were dominated by larger, fire-resistant, trees, up to 600 years old, with grass forb groundcover, to dense stands that are characterized by smaller trees beneath residual large trees with a highly flammable bitterbrush shrub component. The young trees that have grown beneath the residual large ponderosa pine provide a ladder for uncharacteristic fire to kill the large old trees.

This document presents the decision and reasons for the decision regarding which alternative from the Bridge/Buck EA will be implemented. In this decision document, the planning process documented in the EA, and the project planning record, will be summarized as needed to provide adequate context for fully describing the decision.

INTRODUCTION
The Bridge/Buck analysis area includes 34,123 acres within the Bridge Creek and Buck Creek Subwatersheds. This includes 30,189 acres of National Forest System lands within Township 29 South, Ranges 12 and 13 and Township 30 South, Ranges 12 and 13, Willamette Meridian.

The area is centered approximately 12 miles southwest of Silver Lake, Oregon. An interdisciplinary team has completed an Environmental Assessment (EA) for this project.

Figure 1: Vicinity Map

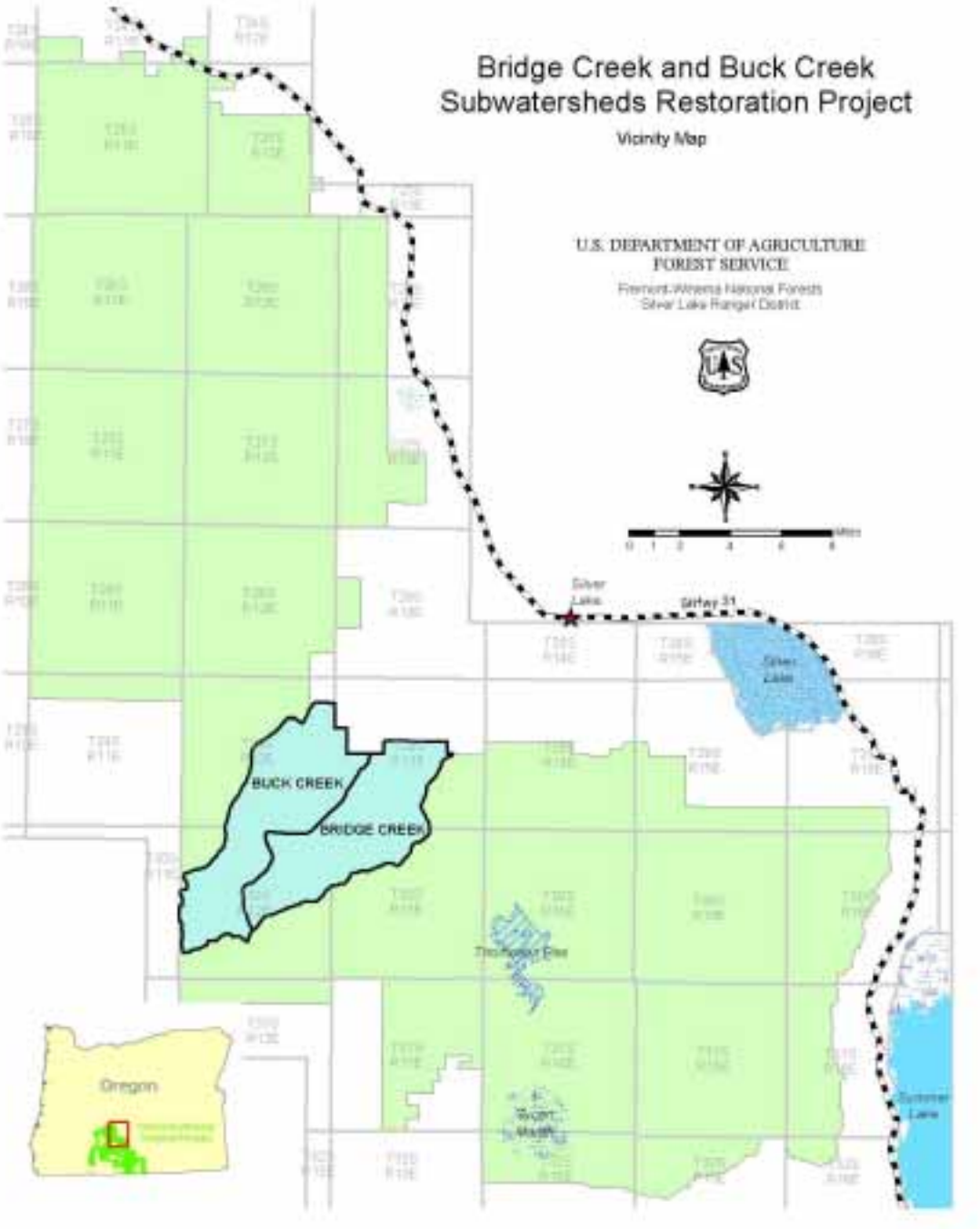
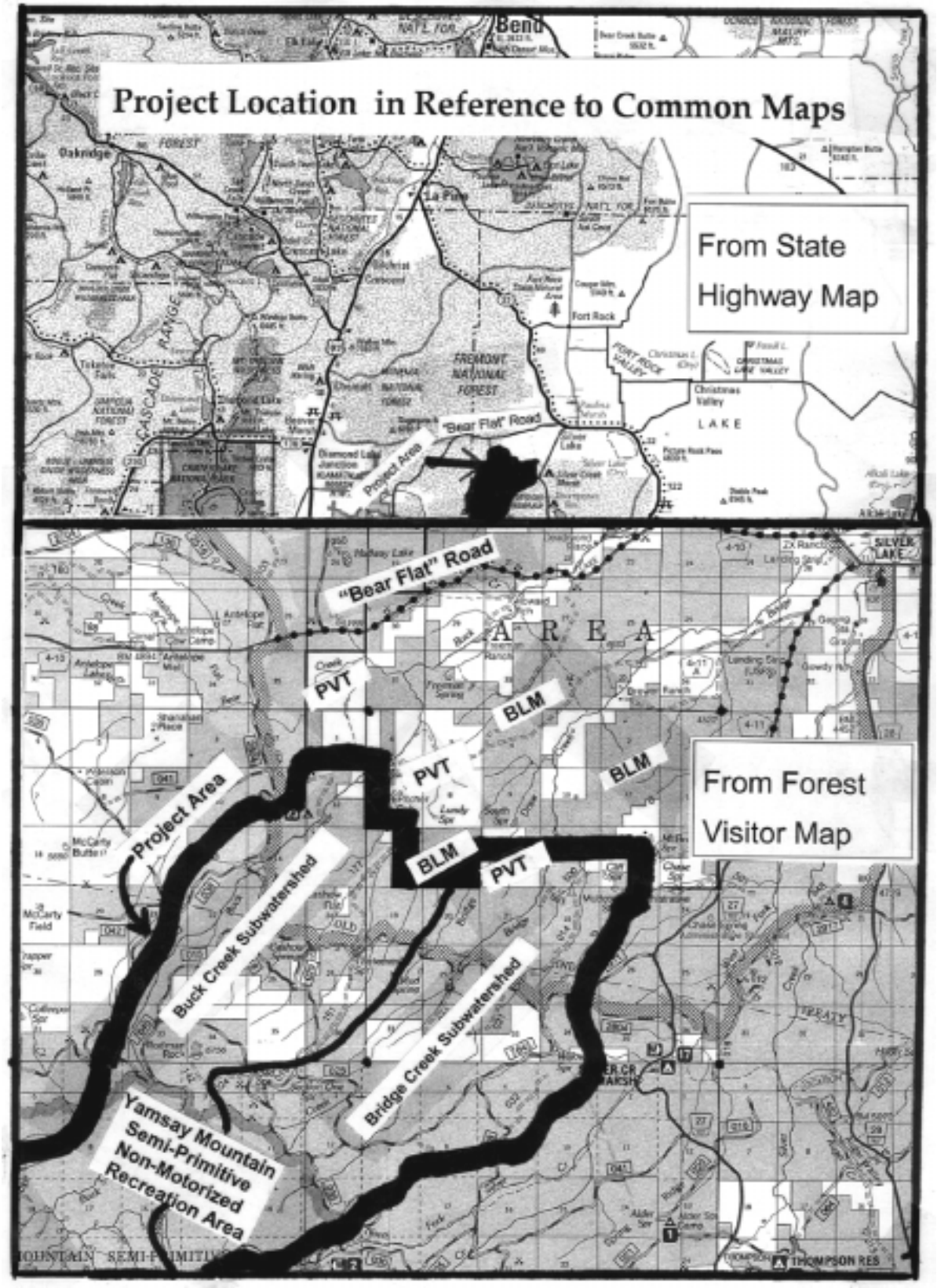


Figure 2: Project Location in Reference to Common Maps



Two watershed evaluations that cover major portions of the project area, with a varying emphasis, have been prepared during the past seven years. Surveys were conducted during the 2000 field season and the data collected was used in the 2003 "Silver Lake Watershed Analysis" (Silver Lake Community Watershed Council). The Fremont National Forest prepared a draft watershed analysis in 2005 to 2007 titled "Bridge Creek and Buck Creek Subwatersheds - Ecosystem Analysis at the Watershed Scale." Together, these two assessments present a detailed (pre-2002 fires and post-2002 fires) understanding of the processes and interactions of concerns that occur within portions of the watersheds contained in this project area.

The Bridge/Buck EA considers proposals for timber harvest, including small and medium diameter live and dead trees up to 20.9 inches dbh, post-harvest whipfelling, prescribed burning, juniper and ponderosa pine stringer thinning, plantation thinning, interplanting of ponderosa pine seedlings, riparian enhancement and stream improvement projects, and a site-specific Fremont National Forest Land and Resource Management Plan (LRMP) Amendment.

Connected actions include pile burning, mechanical slash treatment, temporary road construction, road maintenance, and safety and operations tree felling. If trees greater than 20.9 inches dbh are cut for safety or operations reasons, they will be left on site to provide for additional down woody material unless they would be a safety or road maintenance issue. Temporary road construction and landing construction is expected to require minimal tree felling since none of the temporary road would be on previously unused routes.

Several alternatives were considered. Some were eliminated from a detailed analysis because they did not meet purpose of and need for the project. Three alternatives (including No Action) were analyzed in detail in the EA. The EA is available for review upon request at the Silver Lake Ranger District office in Silver Lake, Oregon or on the Fremont-Winema National Forest web site at:

http://www.fs.fed.us/r6/frewin/projects/analyses/bridgebuck/index.shtml

Modified Alternative 3 addresses conditions that trace back over 100 years, while considering public input received during both the initial project scoping (May, 2006) and the 30-day comment period on the preliminary EA (February, 2007.

PURPOSE AND NEED

The general purposes of this project, consistent with the direction of the 1989 Fremont National Forest Land and Resource Management Plan (LRMP), are to promote the overall sustainability of vegetative systems and hydrologic functioning within the project planning area (the Bridge Creek and Buck Creek Subwatersheds). Specifically, the purposes are to:

- Increase the resiliency of late and old structure conifer stands (LOS) to withstand severe, uncharacteristic fires. Manipulate younger conifer structure in a manner that moves these stands toward a sustainable LOS condition. Control stocking level in order to improve growth and protect stands from fire, insects, and disease.
- Provide wildlife habitat for a wide diversity of species
- Restore functional hydrologic processes, including restoration and maintenance of riparian areas to conditions that enhance riparian-dependent resource values.

- Provide forest products as a by-product of meeting the above purposes.

There are four underlying needs for the project:

1. The need for *forest stands with structural conditions closer to the Historic Range of Variability (HRV)* within the project area.

2. The need for *wildlife habitat within the project area, including snags and down wood and live forest.*

3. The need for *high-quality fish and riparian habitat within the project area.*

4. The need for *commercially valuable timber from the project area*.

Each of these needs as they relate to existing and desired conditions in the project area is discussed in more detail in Chapter 1 of the EA (see EA pages 1-17 to 1-21 "*Relationship between Underlying Needs and Proposed Action*").

In brief, the Bridge Creek and Buck Creek Subwatersheds Restoration project is needed because the area is currently characterized by forests of ponderosa pine and mixed ponderosa pine/white fir with a vegetative composition and fuels profile that have been transformed to a non-sustainable condition. This is primarily as a result of aggressive fire suppression over the past century, amplified by timber harvest that focused on cutting the larger trees without sufficient tending of the residual stands of smaller trees.

The area has been denied characteristic low intensity fire, resulting in substantial forest floor accumulations of brush and pine needles. The young trees that have grown beneath the residual large ponderosa pine now provide a ladder for uncharacteristic fire to kill the large old trees. Those conditions contributed greatly to the July 2002 85,000-acre lightning-caused Toolbox Fire Complex in the adjoining subwatersheds to the east. In that fire, tree mortality of greater than 50 percent occurred in over half the forest stands that burned. 11,000 acres of late and old structure forest (LOS) burned. An estimated 100,000 trees greater than 21 inches diameter breast height (dbh) died (personal communication 8/24/2006, Puddy, Markus, Bowers).

The overall stand structure in the project area has changed from a primarily late successional, single-storied forest pattern, to one that is multi-storied. Stands are also at a much higher density, putting them at risk of uncharacteristic mortality in the large tree component and at risk of uncharacteristic stand replacement wildfire mortality. Historically, most of these stands were characterized by a pure ponderosa pine overstory and a limited ponderosa understory, although, prior to fire exclusion, some stands on the most productive sites did have a component of white fir and lodgepole pine, especially in the understory.

Currently many stands have experienced a substantial expansion of white fir and lodgepole pine. These stands are all at high risk of stress-related mortality, insect and disease-related mortality, and stand replacement wildfire. In the past few years, bark beetle populations and related mortality have been steadily increasing just adjacent to and at the edge of this planning area. The Toolbox Complex (2002) burned into a portion of this area, and increased insect mortality is developing in nearby areas.

The Bridge Creek and Buck Creek Subwatersheds currently represent the largest area of ponderosa pine forest that contains a substantial large tree component on the Silver Lake Ranger District. Other

than 800 acres burned in 2002, no large scale, stand-replacement fire has occurred in these subwatersheds for over 100 years. Limited amounts of characteristic low intensity fire have been introduced recently. During the past 20 years, overstory removal/clearcut or shelterwood harvests have occurred in a scattered fashion over a very small portion of the National Forests System lands in the area.

PUBLIC INVOLVEMENT

The Klamath Tribes were initially made aware of the watershed analysis proposal when Tribal directors were contacted in May 2001 concerning the initiation of the Watershed Analysis. That analysis was substantially delayed by the 2002 Toolbox Fire Complex. However, by February 2006, an initial draft copy of the Watershed Analysis was provided to the Tribes Cultural and Heritage Resources Department and the Natural Resources Department.

Klamath Tribal directors were contacted on February 2, 2006 to initiate consultation on the Bridge Creek and Buck Creek Subwatersheds project. A draft proposed action and maps were distributed at that time. Once a specific set of management activities was formulated into a proposed action, initial public scoping occurred. A detailed proposed action was contained in a scoping packet that was mailed to the public and agencies for comment on May 12, 2006. The proposal was listed in four editions of the Schedule of Proposed Actions for the Fremont–Winema National Forests (spring 2006 through spring 2007).

On February 1, 2007, a fully-described proposed action and a preliminary version of the EA (often referred to in the project record as the "comment EA") were made available for a 30-day public comment period, which ended March 5, 2007. The Forest Service received four separate responses during the comment period. Comment letters were read by the ID Team, other staff, the District Ranger and myself, Ric Rine, the Responsible Official. All comments were included in a content analysis process. This process compiled, categorized, and coded the full range of public viewpoints and concerns. The evaluation of the comments is summarized in Chapter 4 of the EA (Table 4-1) and fully documented in a lengthy tabular document entitled "2007_04_18_Response_to_Comments_Sec.1." This document is available on request from the project record or (without request) on the worldwide web at: http://www.fs.fed.us/r6/frewin/projects/analyses/bridgebuck/index.shtml

The 47 references cited in the comment letters were also individually evaluated. A list of citations from the comment letters is included in Chapter 4 (see *Literature Cited in Comment Letters*). A 25-page documentation of that evaluation (2007_03_24_Response_to_Comments_Sec.2_citations.doc) is available on request from the project record or (without request) on the worldwide web at: http://www.fs.fed.us/r6/frewin/projects/analyses/bridgebuck/index.shtml. The complete record of the public involvement process is available for review in the project file.

On March 30, 2007 myself and members of my staff met with the Chair and a member of the Klamath Indian Game Commission (KIGC) to discuss the project. Three primary topics, as they related to the design of Alternative 3, were the focus of that meeting. While Alternative 3 was favored over Alternative 2 by the KIGC, they expressed concern over the amount of retention of bitterbrush and sagebrush, particularly on Winter and Transition ranges. They requested we increase our shrub retention design. As acknowledged in the project analysis, these shrubs are of critical importance as mule deer forage. We also discussed a need to stipulate an earlier start date for activity restriction near areas where mule deer fawning occurs (the proposal had used the dates May 1 to June 30 for this

restriction). In addition, concern was expressed about the availability of travel and connectivity corridors that could be used by wildlife when traveling through the area, in light of the substantial amount of vegetative treatment included in Alternative 3.

On April 10, 2007 I and members of my staff met with the Klamath Tribes Wildlife Biologist to consider methods, in lieu of fire, that could be used on portions of the treatment areas to maintain and promote age-class diversity of forage shrubs for mule deer. The discussion focused on bitterbrush on winter and transition ranges.

Under the heading "**DECISION**" (below) and "**REASONS FOR THE DECISION**" (page 21 of this document) I will address how the concerns raised by the Klamath Tribes were factored into the modifications to Alternative 3 I have included in my decision.

DECISION

Based upon my review of all alternatives, **it is my decision to implement Modified Alternative 3**. The rationale for this selection is presented beginning on page 21 of this Decision Notice. My decision takes into consideration the manner in which each factor of the project purpose and need would be met by each of the alternatives and the manner in which each alternative responded to the key issues raised during the analysis.

Very briefly, I have selected Modified Alternative 3 because it achieves a balanced approach between actions that promote the long-term development of sustainable forest conditions in conjunction with recovery of commercial timber value, while retaining sufficient amounts of snag, down wood, cover, forage and other wildlife habitat components.

The modifications I've included in the Alternative 3 result for two specific factors. First is the March 30 input received from the KIGC and the April 10 input received from the Klamath Tribes Wildlife Biologist. I have altered some of the local prescriptions for treatment on Winter Range to **reduce the amount of** prescribed fire (as a final step in the sequence of treatments). Specifically the prescribed burning step has been deleted from an approximately 250-acre block in mule deer winter range centered on T. 29 S., R. 13 E., Section 20.

In addition, those areas on both Winter and Transition Ranges where the planned sequence of events in Alternative 3 is stated as "Harvest/(with Post Activity Fuels Treatments)/Burn" will be evaluated post-commercial harvest to identify areas where fire would not be used. Instead, following this evaluation, some areas will be identified where mechanical treatments will be the final step in the sequence of actions. As a result, there will be portions of the "Harvest/(with Post Activity Fuels Treatments)/Burn" where that sequence will occur. In other areas, the use of slashbusters or mowers will achieve the post-commercial harvest objectives, not only silviculturally, but also in terms of the fuels treatment. Such areas were analyzed in the EA as having post harvest activity that included whip-felling, followed by slashbusting or roller chopping, followed by landscape application of prescribed fire.

This Decision includes approximately 2,100 acres on the Winter and Transition ranges that were analyzed as "Harvest/(with Post Activity Fuels Treatments)/Burn." Objectives, and additional information about the above modifications are further addressed under the heading "**REASONS FOR THE DECISION**" (page 21 of this document). I have also increased the mule deer fawning seasonal restriction by two weeks to now include the dates April 15 through June 30.

The second primary factor for modification pertains to cultural resource survey. At this time, approximately 85 percent of the area proposed for treatments has been field surveyed for the presence of heritage resources. These surveyed areas have received certification of compliance with Section 106 of the National Historic Preservation Act from the Forest Archaeologist. His April 3, 2007 certification determined that historic properties will be avoided through the current design of the project, through the criteria contained in the June 2004 Programmatic Agreement among the USFS R6 and the State Historic Preservation Office (SHPO).

I am deferring decision on the 15 percent of the project areas that have not yet been surveyed (approximately 2,000 acres). It is expected that these areas will be field surveyed in 2007, and a decision pertaining to them will be included in a second decision notice during the winter of 2007-2008. All treatments within the remaining 15 percent have been analyzed as a part of Alternative 3 for their effects on wildlife, aquatic resources, soils, vegetation, etc.

Implementation of Modified Alternative 3 will include the full list of mitigation and resource protection measures analyzed for Alternative 3 as described in the EA (pages 2-12 to 2-25). These are listed below. Monitoring, both during implementation and after, as described in the EA (pages 2-25 to 2-26), will also occur to assess compliance with Forest Plan standards and guidelines. It is my judgment that the extent and type of monitoring that has been designed into this project is appropriately modest. My judgment takes into account both a realistic expectation of funding and a perspective of need for monitoring based on lessons learned in implementing similar projects on the Fremont-Winema National Forests in recent years.

It is also my decision to implement the non-significant, site-specific forest plan amendment that is described in the EA (page 2-21) and later in this document. That amendment will allow preceding with riparian enhancement treatments, primarily the non-commercial thinning of encroaching conifers and juniper, that are designed to promote the recovery of riparian vegetation on 475 acres of winter range, that currently serve as mule deer cover and 140 acres of transition range that currently serve as mule deer cover. This project work will promote the recovery of aspen, black cottonwood, willows, and other meadow and riparian vegetation. Although cover would be reduced in the short term along Bridge Creek, Buck Creek, and Thirteen Mile drainage, it is expected that riparian vegetation would increase and expand, developing more suitable fawning habitat, forage, and hiding cover over time. Within these riparian treatment areas located on the winter and transition range, 10 to 15 percent of the area would remain untreated in well distributed leave areas to provide a network of security cover along the riparian corridors.

The actions listed below are <u>authorized</u> with the selection of Modified Alternative 3 (all quantities are approximate); see also the Modified Alternative 3 Map, page 37 of this Decision Notice.

Table 1: Authorized Actions in Modified Alternative 3 compared to Alternative 3

Design Element or Activity		Modified Alt. 3	Alternative 3
Total Acres of all activity		11,322	13,489
Harvest/Whipfell/Burn (Ac.)		4,659 (some areas mechanical in lieu of burning)	5,417
Harvest/Whipfell (acres)		2,200	2,404
Retention Area Design		Same as Alt. 3	Minimum of **10**% of the area treated in well-dispersed no-harvest 1 to 5 acre retention. Emphasis on selecting areas between 2 and 5 acres in size.
Temporary road (Miles)		3.0	3.9
Burn Only (acres)		170	265
Pretreatment/Burn (acres)		687	725
Plantation Thin (acres)		560	527
Plantation Thin/Burn (acres)		670	804
Juniper and Ponderosa Pine Stringer Thin (ac.)		786	1,325* (includes 225 Pvt
Juniper and Ponderosa Pine Stringer Thin/Burn (acres)		929	1,356*****
Retention Strategy in Juniper and Ponderosa Pine Stringer areas		Same as Alt. 3	Retain all old growth Juniper ***** In 3 areas greater than 300 acres in size, 5 to 10% of the area would be left untreated (approx. 100 ac.)
Shrub retention strategy for any area with proposed burn	Summer Range	Same as Alt. 3	40% retention of all shrubs
	Transition Range	Same as Alt. 3	40% retention of all shrubs
	Winter Range	Same as Alt. 3	40% retention of all shrubs, except in areas of Juniper Thin/Burn which would be a minimum of 60% retention of all shrub
Riparian Enhancement with Harvest (acres)		46	46
Riparian Enhancement (total acres) - Outside Yamsay Semi-Primitive Area- - Within YSPA		615 600 15	720 690 30
Stream Improvement		Same as Alt. 3	Pool enhancement/LWD placement activities in Bridge Creek and Buck Creek stream channels. Four culverts that are barriers to fish passage
Need for site-specific Forest Plan Amendment?		Yes	Yes

* on February 16, 2007, Acting District Ranger Lee G. Bowers signed a Decision Memo that

authorized approximately 253 acres of Juniper and Ponderosa Pine Stringer on National Forest System lands and approximately 226 acres of Juniper and Ponderosa Pine Stringer Thin, using Federal funding, on private lands. Each of these actions was fully analyzed in the EA as a component of Alternative 3.

DETAILS OF AUTHORIZED ACTIONS
(for additional detail see EA, Chapter 2)

Harvest/Whipfell (with Post Activity Fuels Treatments) – 2,200 acres

Mechanical thinning in conifer stands (including some conifer stands with a juniper component). Commercial harvest will occur down to an expected 7 inches diameter breast height (dbh). The leave stocking level objective ranges from 30 Basal Area (BA) to 60 BA, depending on site productivity. All live trees greater than or equal to 21 inches diameter breast height (dbh) will be retained. Trees in the 3 to 7 inches range will be treated by one of the following methods, depending on resultant fuels conditions (determined post-harvest), as well as economic and market factors at the time of implementation:

1. Removed to the landing at the same time as harvest, under stewardship authorities (then available as firewood, sold as biomass or burned)
2. Whip-felled and burned in place
3. Mechanically treated in place, either by slashbuster or roller chopper

Harvest (with Post Activity Fuels Treatments)/Burn – 4,659 acres

Same as described above, except prescribed burning will be applied in some areas when all other mechanized treatments have been completed. Burning will use the shrub retention strategies described below. As a modification to Alternative 3, areas on Winter and Transition range will be evaluated post-harvest with the objective of identifying areas where fire would **not** be used. Instead, mechanical treatments will be the final step in the sequence of actions. As a result, there will be portions of the "Harvest (with Post Activity Fuels Treatments)/Burn" where that sequence does in fact occur. In other areas, the use of slashbusters or mowers will achieve the post-commercial harvest objectives, not only silviculturally, but also in terms of the fuels treatment.

Common to all Harvest (both Harvest/Whipfell and Harvest /Whipfell/Burn)

The offering under Modified Alternative 3 is expected to be an economically viable timber sale. This alternative is anticipated to produce approximately 16 mmbf of timber volume, much of which is classed as fiber material.

- If biomass markets are available, material from any of the acres could potentially be sold. Using the sequence of events described above, the biomass operation should not require a second entry into harvest areas.

- Predominantly green timber sales often include a dead-tree component. The analysis used an assumption that 5 to 10 percent of the trees throughout 50 percent of the area proposed for harvest would be dead at the time of harvest. In areas already identified for harvest, dead tree removal will be implemented using the following limitations as design criteria:

  - Dead trees greater than 20.9 inches dbh will not be harvested.
  - In the event that mortality occurs over the next several years at a rate well above our analytical assumptions, supplemental analysis will occur.
  - Dead trees will be left as primary cavity excavator habitat at levels compliant with the direction contained in Regional Forester's Amendment #2 as informed by a DecAID analysis. Before dead tree harvest occurs, retention areas will be identified to insure that the 14,870 acres of ponderosa pine type within the two subwatershed area meet the reference condition percentages for the 4.0-7.9 snags per acre (1340 acres), 8.0-11.9 snags per acre (595 acres), and 12+ snags per acre (595 acres) categories.

- An objective of "non-uniformity" will be incorporated into the leave tree arrangement.

- In green stands that have older dead trees, existing snags will be left to provide habitat for snag-dependent wildlife species; or if needed to be felled for safety reasons, will be left for down wood.

- Whole tree yarding (WTY), meaning trees that are skidded with tops and limbs attached, will be used to provide the initial step of fuels reduction.

- In small areas where the ponderosa pine component has been lost through past harvests or mortality, interplanting of ponderosa pine seedlings at a density of 50 to 125 per acre will be implemented.

Connected Actions to Harvest:

- Pile burning on an estimated 680 sites (about one pile per ten acres)
- Mechanical slash treatment, including mastication (using equipment often referred to as a "slash buster," roller chopper, or similar equipment), in areas to be determined through post-activity monitoring
- Approximately 3.0 miles of temporary road construction
- Road maintenance
- Operations tree felling
- Danger tree felling and related non-ground disturbing fuels treatment

Felling of trees incidental to temporary road construction and landing construction and those felled for safety reasons within activity areas are a connected action to this project. Temporary road construction and landing construction is expected to require minimal tree felling since none of the expected temporary road will be on previously unused routes.

All roads that are used for timber haul will receive road maintenance in accordance with the timber sale contract, including dust abatement. Roads that are used for timber haul or other contractor access are subject to OSHA requirements, including requirements related to hazard trees. The Highway Safety Act governs hazard trees on Maintenance Level 3, 4, or 5 roads. In this project, this includes such roads as Forest Roads 7645 and 2804. If green trees greater than 21 inches dbh, or any snags, are cut due to safety or operations reasons, they will be left on site to provide for additional down woody material unless they create a safety or road maintenance issue.

The amount of hazard tree felling is typically difficult to accurately estimate. However, based on reconnaissance of the project area and of the haul route, it is expected that between 50 and 200 MBF will need to be felled to achieve hazard abatement, including both live and dead trees. This estimate is based on personal communication with Lee Bowers, North Zone Timber (August 22, 2006). Green trees felled for safety reason that are less than 21 inches dbh could become included volume in a timber sale

Retention Areas

(not to be confused with **shrub retention** standards, discussed later)

The following applies to the following treatment activities:

- Harvest/Whipfell
- Harvest/Whipfell/Burn
- Plantation Thin
- Plantation Thin/Burn
- Pretreatment/Burn

A minimum of 10 percent of the area treated will be managed as leave patches for wildlife habitat diversity in scattered retention areas 1 to 5 acres in size. For achieving the 10 percent retention in areas of treatment, emphasis will be on selecting well-dispersed **Retention Areas** between 2 and 5 acres in size. These areas will have no harvest. Some use of prescribed fire, if consistent with the treatment type in the surrounding area, can occur in these areas under the following principles:

- The integrity of the leave patch for providing wildlife habitat will be retained.
- If fire is used, up to ten percent mortality of small trees in retention areas is considered acceptable.

Retention areas of the 2 to 5 acre size will be identified, laid out, and posted prior to project implementation. During implementation, the amount, size, and distribution of leave areas may vary from area to area based on the stand conditions.

In addition to the 10 percent retention described above, approximately 16 percent of the forested area 'below' the Yamsay Mountain Semi-Primitive Recreation Area will remain completely untreated with Modified Alternative 3.

Juniper and Ponderosa Pine Stringer Thin – 786 acres

Outside of harvest areas, juniper cutting is proposed for areas where juniper has expanded beyond its historical range and/or density. All old growth juniper will be retained. All juniper that does not exhibit old growth character will be cut and left in place. The definition of old growth juniper, as stated in "Old Growth Western Juniper Woodlands" (Miller, 1999), will be used. In areas of juniper cutting that are greater than 300 acres in size, 5 to 10 percent of the unit/area will be left untreated. Additionally, thinning of ponderosa pine stringers will occur in these areas where they are present. The thinning will involve cutting ponderosa pine trees up to 12 inches dbh.

Juniper and Ponderosa Pine Stringer Thin/Burn – 929 acres

This is similar to the above action; however these areas will be cut and then burned. In areas of juniper cutting that are greater than 300 acres in size, 5 to 10 percent of the unit/area will be left untreated. In areas where ponderosa pine occurs and an initial localized reintroduction of a fire is feasible, prescribed burning, using the shrub retention strategies described below will be implemented.

Burn Only – 170 acres

This is proposed for areas where low intensity fire has played a role in ecosystem development and existing fuel conditions are characterized by Condition Class 3. Without other vegetative treatments occurring first, prescribed fire will be applied as a first step in re-introducing fire into these areas. Burning will follow the shrub retention strategies described below.

Pretreatment/Burn - 687 acres

Prior to the application of prescribed fire, these areas will receive understory removal and, if needed, mechanical or other fuels treatment. Conifer thinning may cut trees up to 9 inches dbh. A minimum of 10 percent of the area treated will be managed as leave patches for wildlife habitat (see **Retention Areas** above). Burning will use the shrub retention strategies described in the table below, which displays shrub retention strategies for areas of burn (Harvest/Whipfell/Burn; Burn only; Juniper and Ponderosa Pine Stinger/Burn; Pretreatment/Burn; and Plantation Thin/Burn):

Table 2: Shrub Retention Strategies for Areas of Burn

	Modified Alternative 3
Summer Range	40% retention of all shrubs
Transition Range	40% retention of all shrubs
Winter Range	40% retention of all shrubs, except in areas of Juniper and Ponderosa Pine Stringer Thin/Burn which will be a minimum of 60% retention of all shrub

Plantation Thin - 560 acres

Thinning and slash treatment will be with either chainsaws or low ground pressure mechanized equipment. A minimum of 10 percent of the area treated will be managed as leave patches for wildlife habitat (see **Retention Areas** above).

Plantation Thin/Burn - 670 acres

This activity includes thinning, as described above. Prescribed fire will be introduced when all other mechanized treatments have been completed. Burning will use the shrub retention strategies described above. A minimum of 10 percent of the area treated will be managed as leave patches for wildlife habitat (see **Retention Areas** above).

Connected actions to all plantation thinning include fuels treatments.

Riparian Enhancement with Harvest – 46 acres

This activity will occur in one 46-acre area, just south of FS Road 2804 on Buck Creek. It will involve the thinning of encroaching conifers and juniper to promote the recovery of aspen, black cottonwood, willows, and other meadow and riparian vegetation. The prescription is to remove as much of the lodgepole and white fir, up to 21 inches dbh, as possible, with selective removal of ponderosa pine up to 12 inches dbh. There will be "no equipment zones" or "equipment exclusion zones" (EEZ), within 150 feet of Buck Creek. In keeping with Best Management Practices (T8 and T13), winter logging, may allow skid trails and dispersed operations within the entire width of the RHCA. Winter logging will be restricted to conditions that protect the soil and water resources. Soil should be frozen to a minimum of 4 inches and/or have a snow cover of a minimum of 18 inches. Snow must be firm, i.e., cold conditions, and not soft from an extended or daily warming period.

Only non-old growth juniper will be cut (see previous definition).

Thinning and fuels reduction treatments may include mechanical cutting with chainsaws, use of low ground pressure mechanized equipment, or prescribed fire.

Riparian Enhancement – 615 acres

Same as above, but will include only non-commercial thinning of encroaching conifers and juniper. This riparian thinning may cut ponderosa pine trees up to 16 inches dbh and lodgepole pine trees up to 21 inches dbh. Riparian management objectives, including retention of future sources of large wood and fuel loading considerations, will be the primary determinants of how much and which conifers will be cut. Both fuels and fisheries personnel, as well as wildlife will be involved with the layout. *The conifers will be left in place following cutting.* In areas where this would result in fuel loading at levels that present substantial risk to the sustainability of the area, conifers above 12 inches will not be cut.

The 30 acres of treatment that are proposed within the Yamsay Mountain Semi-Primitive Non-Motorized Recreation Area will typically be accomplished with chainsaws. Motorized access will not be allowed.

For both of the Riparian Enhancement categories, as per LRMP direction for MA 15, soil, fish, water, and wildlife will be given preferential consideration if conflicts with operational or other resource objectives arise during layout or implementation (LRMP, p.199).

Stream Improvement

Site-specific pool enhancement/LWD placement activities for portions of the Bridge Creek and Buck Creek stream channels. Four culverts that are barriers to fish passage have been been analyzed for their prioritization for correction. This includes: 2804-Bridge Cr; 2804-Buck Cr; 7645-Bridge Cr; and 2804501-Bridge Cr.

Site-Specific Forest Plan Amendment

As proposed, this alternative triggers the need for a site-specific Forest Plan amendment for Mule Deer Cover and Habitat Effectiveness Standards on Transition and Winter Ranges. The Forest Plan directs maintenance of at least 30 percent cover on transition range (LRMP, p.109) and directs than, on winter range, 40 to 50 percent of those areas capable of producing thermal cover be managed for thermal cover (LRMP, p.133). Analysis of this proposal indicates that 475 acres of winter range cover and 140

acres of transition range cover will become non-cover, primarily as a result of riparian enhancement treatments that are designed to promote the recovery of riparian vegetation. This will mean a reduction in percent cover on winter range from the current 15 percent to 9 percent and on transition range from the current 27 percent to 23 percent.

ADDITIONAL PROJECT DESIGN CRITERIA, INCLUDING RESOURCE PROTECTION MEASURES

The following design features and/or resource protection measures are an integral part of Modified 3. With the exception of a modification to Wildlife Measure #8, they are the same as those analyzed for Alternative 3 in the EA.

Wildlife

1. Should any proposed or listed endangered, threatened, or sensitive species be found during project activities within, adjacent, or near enough that activities could be a disturbance, activities will be halted until their effects can be determined and their significance assessed.

2. If an active raptor nest is found during operation, LRMP Standards and Guidelines will be followed at a minimum. The LRMP states that "major activities such as logging and road construction adjacent (300 yards) to active raptor nests, should be postponed until young have fledged (usually around July 30)" (LRMP, p.180). Contact the Wildlife Biologist.

3. All temporary or currently closed roads opened to access treatment areas will be closed upon completion of operations. As per BMP R-7 (d), temporary roads should be removed by obliteration (obliteration implies recontouring the road to the slope that matches the contour or sub-soiling and shattering a minimum of 80 percent of the compacted soil). Entrances of obliterated roads should be closed with large water bars or other barriers that would prevent access to the area. Sub-soiled roads should have water bars and broad-based dips along the length of the road to provide cross drainage.

4. If bark beetle activity becomes prevalent and limited dead tree harvest is implemented as part of the project:
    - no snags greater than 20.9 inches dbh will be harvested.
    - outside of areas where dead tree removal occurs, if snags are cut due to safety reasons, they will be left on site to provide for additional down wood material except if, after being felled, they present a safety or road maintenance hazard. If needed, they will be treated to lower their hazardous fuels potential.

5. In the event that mortality occurs over the next several years at a rate well above our analytical assumptions (5 to 10 percent of the trees dead throughout 50 percent of the area), supplemental analysis would be used to examine the need to alter the implementation of this project in regard to the effects of extensive hazard abatement.

6. Snag loss during logging operations will be avoided to the extent possible by placing skid trails and landings away from snag clumps.

7. Mitigate the effects of proposed activities on the active goshawk nests by restricting activities from 3/1 - 8/31 within the areas identified on the Wildlife Seasonal Timing Restrictions map (Figure 2-7)

at the end of Chapter 2. No activities may occur within this time period unless the District Wildlife Biologist has determined that nesting is not occurring.

8. Mitigate the effects of proposed activities on fawning by restricting activities from 4/15 – 6/30 within the areas identified on the map (Figure 2-7) at the end of Chapter 2. No activities may occur within this time period unless the District Wildlife Biologist has determined that the area does not provide for adequate fawning habitat, which includes riparian areas with a high density of shrubs, lush forage, and running water). Note: this restriction period begins two weeks earlier than it would have with Alternatives 2 or 3.

Aquatics and Soils

1. The guidelines in the soil productivity guide (USDA, 2000) shall be followed for the protection of soil during any project activity. See EA Appendix B – Project Design Criteria Details for the complete content of the Soil Productivity Guide.

2. Best Management Practices – All roadwork associated with implementation of the project will follow the Roads Best Management Practices (Fremont National Forest Supplement). See EA Appendix B – Project Design Criteria Details. All timber sale associated work will follow the Timber Sale Best Management Practices (Fremont National Forest Supplement). See EA Appendix B – Project Design Criteria Details. Included in these BMPs are requirements to rehabilitate all temporary roads, either through re-contouring, in the event cut slopes/fill slopes have been created, or through subsoiling or scarification to a depth of 8 inches. In addition, landings and skid trails (if they have been used for numerous passes) will be evaluated for subsoiling or scarification to a depth of 8 inches. The evaluation will involve Forest Service employees representing sale administration, the noxious weed program, and soils/hydrology.

3. INFISH standards and guidelines will be adhered to. Riparian Habitat Conservation Areas, as defined in INFISH, are portions of watersheds where riparian dependent resources receive primary emphasis and management activities are subject to specific standards and guidelines. INFISH Standards and Guidelines for Timber Management (TM-1) prohibits timber harvest within RHCAs, except as follows:

   a. Where catastrophic events such as fire, flooding, volcanic, wind, or insect damage result in degraded riparian conditions, allow salvage..... where cutting would not retard or prevent attainment of other Riparian Management Objectives (RMOs) and where adverse effects can be avoided to inland native fish.

   b. Apply silvicultural practices for RHCAs to acquire desired vegetation characteristics where needed to attain RMOs.....where practices would not retard or prevent attainment of other Riparian Management Objectives (RMOs) and where adverse effects can be avoided to inland native fish.

Standard RHCA widths are as follows:

(Category 1) Perennial Fish Bearing Streams

- The area on either side of the steam extending from the edges of the active stream channel to the top of the inner gorge, or the outer edges of the 100-year floodplain, or the outer edges of riparian vegetation, or to a distance equal to the height of two site-potential trees,

or 300 feet slope distance (600 feet, including both sides of the stream channel), whichever is greatest.

(Category 2) Perennial non-Fish Bearing Streams (none in project area)

(Category 3) Ponds, lakes, reservoirs, and wetlands greater than 1 acre

- The body of water or wetland and the area to the outer edges of the riparian vegetation, or to the extent of the seasonally saturated soil intermittent stream channel or wetland and the area to the outer edges of the riparian vegetation, or to a distance equal to the height of one site potential tree, or 150 feet slope distance from the edge of the wetland, whichever is greatest.

(Category 4) Intermittent streams and wetlands less than 1 acre

- The intermittent stream channel and the area to the top of the inner gorge.
- The intermittent stream channel or wetland and the area to the outer edges of the riparian vegetation.
- The area to the edge of the channel or wetland to a distance equal to the height of one-half site potential tree, or 50 feet slope distance, which ever is greatest.

Botany

The Fremont-Winema Weed Prevention Strategy can be found in EA Appendix B – Project Design Criteria Details.

1. Noxious Weeds: The following were taken from the 2005 Invasive Plant EIS ROD.

- In accordance with the Record of Decision ("2005 ROD") for the USDA Forest Service PNW Region Invasive Plant Program FEIS, actions conducted or authorized by written permit by the Forest Service that will operate outside the limits of the road prism (including public works and service contracts), require the cleaning of all heavy equipment (bulldozers, skidders, graders, backhoes, dump trucks, etc.) prior to entering National Forest System Lands. This does not apply to initial attack of wildland fires, and other emergency situations where cleaning would delay response time.
- In accordance with the 2005 ROD, inspect active gravel, fill, sand stockpiles, quarry sites, and borrow material for invasive plants before use and transport. Treat or require treatment of infested sources before any use of pit material. Use only gravel, fill, sand, and rock that is judged to be weed free by District or Forest weed specialists.
- In accordance with the 2005 ROD, conduct road blading, brushing, and ditch cleaning in areas with high concentrations of invasive plants in consultation with District or Forest-level invasive plant specialists. Incorporate invasive plant prevention practices as appropriate.
- In accordance with the 2005 ROD, native plant materials are the first choice in revegetation for restoration and rehabilitation where timely natural regeneration of the native plant community is not likely to occur. Non-native, non-invasive plant species may be used in any of the following situations: 1) when needed in emergency conditions to protect basic resource values (e.g., soil stability, water quality, and to help prevent the establishment of invasive species); 2) as an interim, non-persistent measure designed to aid in the re-establishment of native plants; 3) if native plant materials are not available; or 4) in permanently altered plant communities. Under no circumstances will non-native invasive plant species be used for revegetation.
- If noxious weed sites are discovered within the project area, report the sighting to District weed personnel. The site will be reviewed on the ground and invasive plant prevention practices will

be developed as appropriate.

2. Sensitive Plants
- *Penstemon glaucinus* will not require any additional measure due to this specie's favorable response to disturbance.

Cultural Resources

1. Sites located in and near proposed treatment areas will be identified and avoided. Whenever possible, unit boundaries will be drawn or redrawn to entirely exclude sites. Special harvest methods may be required (directional felling, use of articulated boom harvesters).

2. There will be pre-operations coordination between the assigned archaeologist and either the sale administrator, prescribed burning boss, or contracting officer's representative to discuss all information pertaining to cultural resource protection. For timber sales, this will include known site locations, protocol by which sites have been identified on the ground, and how sites have been identified on working copies of the sale area map.

3. Underburning in or around cultural sites will be implemented following establishment of protection lines or other avoidance measures, such as lighting pattern.

4. If sites are discovered during on-the-ground preparation of sale units or at any time during harvest or any ground disturbing activity, the assigned archaeologist will be notified. The site will be reviewed on the ground and protection measures will be developed. Project activity will stop in the immediate area while a plan to mitigate the effects is formulated. Once the mitigation work is completed and resources are protected, project activity may proceed.

Recreation

1. Timber to be harvested within 150 feet of developed recreation sites will be directionally felled, skidded, or yarded away from the sites wherever practical.
2. Use existing landings or new landings 200 feet or further away from developed recreation sites, preferably screened from the sites by residual forest or topography, unless no practical options exist.
3. Heavy project-generated slash requiring piling in the vicinity of developed recreation sites will be piled a minimum of 50 to 75 feet away from the sites, using natural visual screening wherever practical.
4. Future thinning of reforested areas immediately adjacent to developed recreation sites will avoid impacting the sites with slash by using the strategies outlined in #3 listed above.

MONITORING

Wildlife
- Continued avian point count monitoring at the Bridge Creek and Buck Creek locations.
- Continued monitoring of tree mortality levels to assure the stands remain within planning assumptions and that snag levels are being maintained.

Cultural Resources
- All cultural sites previously recorded or potentially eligible for National Register of Historic Places will be flagged and avoided.

- All sites recorded will be monitored during harvesting, thinning, and/or underburning activities.
- Twenty percent of recorded sites will be monitored and visited each year for any impacts.

Riparian Resources

- Removal of encroaching overstory within the 46 acres of riparian enhancement adjacent to Buck Creek will be monitored by the Sale Administrator or Soil Scientist to ensure soil displacement is minimized and mitigated.

Noxious Weeds

- Revisit project areas, high use areas, wildfires, and revegetation sites to determine the effectiveness of prevention measures, and to detect new infestations before they spread.
    1. Monitor project areas after ground disturbing activities are implemented for 1 to 3 years.
    2. Monitor livestock unloading areas and areas of concentrated livestock use.
    3. Monitor administrative sites, main roadways, and developed recreation areas.
    4. Monitor gravel pits and stockpiles of fill, sand, or gravel.
    5. Monitor areas burned by wildfire. Burned areas may be susceptible to weed infestation for 5 to 10 years or more.

Recreation Sites

- Monitoring of the developed recreation sites within the Bridge/Buck project area to track the short and long-term effects of the project activities and associated project design criteria on these recreation resources will be accomplished by the following methods:
    1. Periodic condition review of developed facilities by Forest recreation/trail coordination staff.
    2. Regular inspection and upward reporting of developed sites and surrounding area conditions by District maintenance crews.
    3. Forest and Ranger District follow-up of recreation visitor comments or concerns related to project-related conditions.

OTHER ALTERNATIVES

Other than Alternative 3, one other action alternative and a no-action alternative were analyzed in detail in the EA. An alternative suggested during initial project scoping was considered but not analyzed in detail. Two alternatives or major project components that were considered by the IDT were not analyzed in detail. All action alternatives that were developed and analyzed were designed to meet the stated project purpose and need. All alternatives that were developed and analyzed in the EA are compliant with Forest Plan Standards and Guidelines, as amended by Regional Forester Amendments, INFISH and project-specific amendments.

Alternative 1 – No Action

Under this alternative, no harvest, slash treatment, temporary road construction, juniper cutting, burning, plantation thinning, riparian enhancement, road management, stream improvement, or Forest Plan Amendment, unless authorized by another planning process, would occur in response to the purpose and need. Ongoing management practices (such as road maintenance, fire suppression, and personal use firewood cutting) would continue with the selection of this alternative.

Alternative 2 – Proposed Action (in both the Initial Project Scoping and in the EA)

This alternative is the proposed action, as introduced in EA Chapter 1. It represents a more detailed version of the proposal presented to the public for scoping in May 2006, including clarification of the overall retention strategies and the shrub mosaic for prescribed burning. It also includes a modified design for riparian treatments. This alternative is in response to the purpose and needs identified in EA Chapter 1 and in this Decision Notice. As such, Alternative 2 represents the agency's initial proposal

to meet project purpose and need. The primary differences between this proposed action and Alternative 3 are that Alternative 2 provides less overall vegetative diversity, emphasis on smaller no-harvest retention area design (in the lower end of the 1 to 5 acre range), an overall smaller number of acres of retention, no retention designs specific to areas of juniper treatment, and lesser retention standards for non-fire tolerant shrubs during prescribed burning operations. Alternative 2 has substantially more proposed riparian/meadow enhancement activity for locations within the Yamsay Mountain Semi-Primitive Non-Motorized Recreation Area.

ALTERNATIVES CONSIDERED, BUT ELIMINATED FROM DETAILED STUDY
Only alternatives or specific design elements that were responsive to purpose and need were fully developed and analyzed. Alternatives are, by definition, other strategies or ways to meet purpose and need.

Alternatives with Lower Diameter Limit and/or **Retention of "Small Diameter Old Growth"**
Alternatives that would have excluded trees from harvest at an upper diameter harvest limit less than the 21 inch limit, or that would specifically target retention of smaller trees with old growth characteristics, were considered during the analysis process. As described in the EA on pages 2-27 and 2-28, consideration of using a smaller diameter limit was prompted by a June 8, 2006 letter from the Oregon Natural Resources Council, which stated "*Please consider setting a smaller diameter limit. For fuels reduction purposes, removing trees less than 12 inches is most effective. For forest health purposes, leaving the biggest trees will be most beneficial."*

This alternative was not analyzed in detail because it would substantially lessen the attainment of purpose and need, in regard to the following (purpose and need):

- Increase the resiliency of late and old structure conifer stands (LOS) to withstand severe, uncharacteristic fires. Control stocking level in order to improve growth and protect stands from fire, insects, and disease.

- Provide forest products as a by-product of meeting the above purposes.

As reported in Chapter 3, Forested Vegetation, even at the upper harvest limit of 20.9 inches dbh, the objective of creating sustainable stand conditions would not be met on all acres because of the existing high stocking levels of trees greater than 21 inches dbh. In such stands, when trees over 21 inches dbh are present in excess of that level, they would not be removed and these more heavily-stocked clumps will experience a continuation of stress-related mortality. Establishing a smaller upper diameter limit would greatly increase the numbers of acres on which stocking levels objectives for creating sustainable conditions would not be met. The thinning proposed in Bridge/Buck is similar to the "Leave 45 sq ft BA, From Below (*BA 45*)" prescription studied by Mason (2003). That study concluded that the BA 45 prescription had the best overall fire risk reduction performance. Considering this, the prescriptions for Bridge Buck are generally supported by Mason et al, though that study did not include an "alternative" that was identical to those studied in Bridge/Buck.

For additional discussion see:
- EA Chapter 2, under the heading "Alternatives Considered, But Eliminated from Detailed Study" (pages 2-27 to 2-28) and
- Chapter 4, page 4, Summary of Comment and Responses and
- 2007_03_24_Response_to_Comments_Sec.2_citations.doc on the WWW at http://www.fs.fed.us/r6/frewin/projects/analyses/bridgebuck/index.shtml

EA Chapter 2 also summarizes consideration of an "Alternative with Site-Specific Amendment to Allow Harvest of Live Trees greater than 21 inches dbh" and an "Alternative with Implementation of Road Management Strategy" (EA pages 2-27 and 2-29).

REASONS FOR THE DECISION

I have read the Bridge Buck EA and have determined that there is sufficient information to provide a reasoned decision. The analysis documented in the Bridge/Buck EA explores the necessity for action (or no-action) in relation to four identified needs. The analysis also weighs the relative success of the alternatives in achieving four identified purposes. Finally, my decision considers the public comments and the key issues raised by those comments.

Alternative 3 was developed in response to the Key Issues of: 1.) Effects on wildlife habitat diversity, including mule deer habitat, 2.) Juniper habitat and 3.) Implementation access and practicality.

Briefly, in comparison to Alternative 2, Alternative 3 and Modified Alternative 3 provide greater overall vegetative diversity, emphasis on larger no-harvest retention area design, an overall increase in the acres of retention, retention designs that are specific to areas of juniper treatment, and additional retention of non-fire tolerant shrubs. Modified Alternative 3 has substantially less proposed riparian/meadow enhancement activity for locations within the Yamsay Mountain Semi-Primitive Non-Motorized Recreation Area, than Alternative 2. Unfortunately, the logistics and expected expense of implementing activities that would be up to 6 miles from the nearest open road and 3 miles from the nearest maintained trail mean that implementing these projects would inevitably detract from the ability to fund much needed vegetative restoration in the lower two-thirds of the planning area.

Decision Factor – Why the Project is Needed (*the need for action versus no-action*)

1. Development of a sustainable forest with structural conditions closer to the Historic Range of Variability depends on maintaining stand conditions and fuels conditions that do not contribute to future fires with large-scale stand replacement mortality. The latter is practical only if fuels conditions allow facilitating the eventual return of characteristic fire (i.e. frequent, low-intensity, stand-tending fire) to areas that were historically fire-dependent.

   The combinations of harvest, whipfelling, and follow-up fuels treatments that are a central component of the action alternatives are expected to produce a slight decline in mortality (vs. no-action) in the LOS component. This will allow for development of larger tree size within the current LOS component. Due to a significant stocking level reduction, the remaining conifer component should greatly increase individual tree growth rates after a lag period averaging five years. This will facilitate increased recruitment into the LOS category and these trees should be of good individual tree vigor and have increased wind firm characteristics.

   The use of prescribed fire in many of the areas designed for harvest and whipfell will represent the first step in returning characteristic fire to the area. Those areas which will still need other fuels pre-treatment prior to prescribed fire application will at least move closer to a condition where characteristic fire can be reintroduced. Such a scenario would not occur with the No Action alternative and therefore Alternative 1 would not contribute to the *need for forest stands with structural conditions closer to the Historic Range of Variability (HRV) within the project area*.

2. The *need for wildlife habitat within the project area, including snags and down wood* could be met in the short-term without action. However, meeting the longer-term needs that are associated with live forest habitats, particularly late and old structural forest habitats, would face an unacceptable level of risk of being significantly retarded without action, as the area would remain highly subject to landscape level disturbance that would move the area back to earlier seral stages. Active intervention to promote sustainability of these stands is the most effective and prudent way to insure continued presence of live LOS forest habitats.

3. The *need for high-quality fish and riparian habitat within the project area* would be partially met without action. However, Alternatives 2 and 3 both include positive action to directly facilitate the creation and maintenance of such habitats. Specifically:

    - substantial amounts of non-commercial thinning of encroaching conifers and juniper to promote the recovery of aspen, black cottonwood, willows, and other meadow and riparian vegetation
    - a small selected area of riparian vegetation enhancement that does include come commercial harvest
    - site-specific pool enhancement/LWD placement activities in portions of the Bridge Creek and Buck Creek stream channels, and
    - culvert replacement at locations that are currently barriers to fish passage.

4. The Fremont National Forest Land and Resource Management Plan (LRMP) (1989), includes a Forest-wide management goal to provide sawtimber and other wood products to help sustain a viable local economy. A no-action scenario would do nothing to meet the *need for commercially valuable timber from the project area*. As discussed later, the action alternatives provide varying levels of attainment in relation to this need.

Decision Factor – Meeting Project Purpose (*reasons Modified Alternative 3 provides the best overall attainment*)

Both Alternatives 2 and 3 would meet all four elements of stated project purpose. Alternative 1, for the same reasons discussed above, would not meet all four elements. I have selected Modified Alternative 3, in part, because it provides the best balance of results in relation to the stated project purpose.

1. *Increase the resiliency of late and old structure conifer stands* – Alternative 2 would promote restoration of sustainable pine forests on a slightly larger area (about five percent more acres) than Alternative 3 – in other words, five percent more area on which a full range of treatments would occur (harvest, whipfell, fuels treatment and prescribed fire or mechanical fuels treatments). Alternative 3 would fully promote restoration of sustainable ponderosa pine forests on a slightly larger area (about 11 percent more acres) than Modified Alternative 3. However, most of this difference relates to the deferral of decision in advance of completing the cultural resource surveys for the entire project area, as discussed earlier in this document. Compared to Alternative 1, which would have no treatments that benefit ponderosa pine LOS, all action alternatives would generate substantial positive effects. I do not consider the five percent difference or 11 percent difference in these alternatives, relative to increasing the resiliency of LOS, to be of critical importance, nor does it rise to the level that would cause me to favor Alternative 2 over Alternative 3.

2. *Provide wildlife habitat for a wide diversity of species* – The analysis in Chapter 3, which discloses the effects on over 30 different broad or narrow wildlife habitat types and/or species, reports that, in all cases, the expected effects from Alternative 3 on wildlife habitat would be equal to or favorable to the effects that would be expected from Alternative 2. Some highlights of this include:

Snag and Down Wood Dependent Species	Alternative 3 (and Modified Alternative 3) would provide a slight increase in the percent of area in the higher snag densities over time than Alternative 2, because of the increased amount of retention area, and the emphasis with Alternative 3 on selecting retention areas in upper end of the 1 to 5 acre size category.
Mule Deer	Alternative 3 has larger retention areas in harvest areas, which provide a better assurance of enhancing the juxtaposition of cover to forage that is favorable as mule deer habitat. Both Alternative 3 and Modified Alternative 3 take a more conservative approach than Alternative 2 regarding retention of non-fire tolerant shrubs (see EA table 2-1, pages 2-4 to 2-5 and discussion below) under "Decision Factor – The Issues and Public Comment"). Modifications incorporated into this Decision that will result in the substitution of mechanical fuels treatments in some areas of winter and transition rages, in lieu of fire, provide further reason for my determination that Modified Alternative 3 is the most favorable action alternative in terms of mule deer habitat.
Rocky Mountain Elk	The retention areas in Alternative 3 (and Modified Alternative 3) would emphasize larger retention patches, ranging from 2 to 5 acres in size. Larger retention areas are more effective for providing elk hiding cover. This would provide a better assurance of enhancing a favorable juxtaposition of cover to forage.
Goshawk	Alternative 3 (and Modified Alternative 3) provides a greater assurance of providing the structural diversity required for goshawk nesting and habitat for prey species than Alternative 2
Gray flycatchers	Within three of the largest juniper treatment areas, 5 to 10 percent (66 to 132 acres) would remain untreated in wildlife leave areas in Alternative 3 (and Modified Alternative 3). This provides a better assurance of maintaining nesting habitat for gray flycatchers than Alternative 2

I do consider the difference in these alternatives, relative to provide suitable wildlife habitat for a wide diversity of species, to be of critical importance, and therefore, in this regard, I favor Alternative 3 (including Modified Alternative 3) over Alternative 2.

3. *Restore functional hydrologic processes, including restoration and maintenance of riparian areas to conditions that enhance riparian-dependent resource value* – Both action alternatives include substantial amounts of activity designed to achieve this purpose. This includes non-commercial thinning of encroaching conifers and juniper, 46 acres of commercial treatment within riparian area to promote a more natural, sustainable riparian vegetation community, consistent with INFISH standard M-1b, and LWD placement. However, Alternative 3 includes 720 total acres of non-commercial

riparian treatments compared to 1,480 acres in Alternative 2. In the area below the Yamsay Mountain Semi-Primitive Non-Motorized Recreation Area, the two Alternatives are essentially the same. Due to the substantially greater amount of benefit that would occur within the Yamsay Mountain Semi-Primitive Non-Motorized Recreation Area with Alternative 3, in that regard, I favor Alternative 2 over Alternative 3. Selecting Alternative 3 does not preclude the future consideration of this project element. Assuming that funding to complete necessary cultural resource surveys (per-decision) and funding to implement layout and administration of the project work, this activity could be included in a subsequent decision.

4. *Provide forest products as a by-product of meeting the above purposes* – The lumber and wood products sector, including secondary wood products, is a large contributor to the economic well being of south central Oregon. Alternative 2 includes a total of about 19 million board feet of timber and Alternative 3 includes a total of about 18 million board feet of timb**er. In both cases,** much of the volume would be classed as fiber material. Due to the variations of calculating fiber material, these volume estimates are especially variable. The offering under both action alternatives are expected to result in economically viable timber sale offerings. I do not consider the small difference in these alternatives, relative to providing forest products to be of crucial importance, nor does it rise to the level that would cause me to favor Alternative 2 over Alternative 3, simply because Alternative 2 is slightly more response to this element of purpose and need.

Decision Factor – The Issues and Public Comment

I have selected Modified Alternative 3, in part, because it offers a better solution to the key issues. The following issues, identified by public scoping responses to the initial proposed action, were identified and tracked through the analysis process:

Key Issue One: *Effects on Wildlife Habitat (Mule Deer and Other MIS)*
Initial Scoping respondents offered the following input or suggestions on this topic:

- Maintain cover well distributed across the landscape
- Improve wildlife values by retaining some dense patches and/or thickets of saplings.
- Maintain 40 percent of non-fire tolerant shrub habitat component during prescribed fire treatments.

Key Issue Two: *Effects on Habitat (Juniper ecotypes)*
Initial Scoping respondents offered the following input or suggestions on this topic:

- Consider all the reasons why all older juniper, as well as a variety of juniper densities across the landscape, is important to the ecosystem before removing any of these trees.
- juniper provides mule deer cover, foraging and nesting habitat for neo-tropical migrants .....Therefore, we recommend maintaining approximately five trees in a clump/acre if juniper treatment areas are greater than 300 acres

Key Issue Three: *Implementation Practicality and Access*
The issue exists because there is a need to treat portions of the Yamsay Mountain Semi-Primitive Non-Motorized Recreation Area, but there are practical considerations pertaining to access and associated expense.

A comparative table of how each alternative responds to these Key Issues is presented at the end of EA Chapter 2 (pages 2-30 to 2-31). In all cases, Alternative 3 (and modified Alternative 3 to an equal or greater degree) responds best to the key issues.

In relation to public comments received since initial scoping and development of the three key issues, Modified Alternative 3 is similarly more responsive than Alternative 3 (un-modified) or Alternative 2. Modified Alternative 3 best responds to comments following publication of the preliminary EA during the 30-day comment period. Specifically, as discussed on pages 6 and 7 of this Decision, concerns raised by the KIGC and the Klamath Tribes Wildlife Biologist, have been addressed by deleting prescribed fire on a specific 250-acre area of Winter Range (see page 7 of this document) and by the substituting mechanical fuels treatments in some areas of winter and transition rages, in lieu of fire. The objective of this modification is not only to protect, in the present, some areas of valuable winter forage from being killed by fire, but also to maintain and promote age-class diversity of forage shrubs and understory vegetation in the long term. This will be achieved by implementing a sequence of "Harvest (with Post Activity Fuels Treatments)/Mechanical (mower or slashbuster)" in some areas, and, in fact, implementing a sequence of "Harvest (with Post Activity Fuels Treatments)/Burn in others.

In juniper habitats, Alternative 3 would provide a better assurance of maintaining an adequate distribution of hiding and thermal cover for mule deer.

Conclusion

All action alternatives include a combination of actions designed to promote the overall sustainability of vegetative systems and hydrologic functioning within the project planning area. However, I believe that the specific balance achieved with Modified Alternative 3, in regard to the three most significant issues that arose during the analysis, provides the best overall response. It is my judgment that the selection of Modified Alternative 3 provides substantial and meaningful attainment of purpose and need for this project.

FINDING OF NO SIGNIFICANT IMPACT

Sufficient information has been disclosed in the analysis to make a reasoned choice among alternatives. No significant impacts on the quality of the human environment have been identified. Information available from past actions of similar context and intensity in this area also indicates that no significant impacts would be anticipated.

The actions described in this Decision Notice DN will be limited in scope and geographic application (40 CFR 1508.27(a)). The location of the actions within Township 23 South, Ranges 12 and 13 and Township 23 South, Ranges 12 and 13 is described on maps included in the EA (see EA pages *ix*, 1-2, 2-33 to 2-39, and Figures 1, 2, and 3 of this Decision Notice. The physical and biological effects are limited. No impacts were identified that went beyond the Bridge Creek and Buck Creek subwatersheds.

Based on the site-specific analysis summarized in the Bridge/Buck EA and on previous experience with similar proposals, I have determined that implementation of the actions described in Modified Alternative 3 are not a major Federal action, individually or cumulatively, and will not have a significant effect on the quality of the human environment, considering the context and intensity of

impacts (40 CFR 1508.27). Thus, an environmental impact statement will not be prepared. This determination is based on the design of the project, on the mitigation and resource protection measures included in the selected alternative (see Decision Notice pages 15-18, EA pages 2-21 to 2-25, and EA Appendix B – Mitigation Details, and on the consideration of the following factors:

1. **Impacts that may be both Beneficial and Adverse** (40 CFR 1508.27(b)(1)). Beneficial and adverse impacts of implementing Alternative 3 have been fully considered within the EA. Beneficial and adverse direct, indirect, and cumulative environmental impacts discussed in the EA have been disclosed within the appropriate context and intensity. There will be no significant direct, indirect, or cumulative effects to the various resources of the area or other components of the environment. A summary of expected impacts, as reported in the EA, including localized short term adverse impacts to: soils; water quality/aquatic habitat; and unroaded areas as well as several wildlife species, is displayed in the following table.

Table 3: Non-significant Adverse Impacts (Final EA page numbers in parenthesis)

Resource and Adverse Impact as per EA	**Reason the Impact is Not Significant**
Dead tree removal (if bark beetle activity becomes prevalent) implemented within the project area may decrease **goshawk** habitat	Overall, both positive and negative effects from the action alternatives are noted in Chapter 3 (3-6 to 3-9). 1 to 5 acre retention areas in Alternative 3 provide structural diversity required for goshawk nesting and habitat for prey species (3-7).
Percent **cover** would be reduced from 15 to 9 percent on the mule deer winter range and from 27 to 23 percent on the transition range (3-13 to 16).	The decrease in cover is the result of riparian enhancement treatments. Cover reductions will be short term. Riparian vegetation will increase and expand (3-13). Planned treatments will provide growing space for restoration
Percent **cover** would be reduced from 69 to 51 percent on summer range (3-15 to 3-18).	Reduction is compliant with LRMP S&Gs to retain a minimum of 30 percent cover on summer range (3-15, 3-18 and 3-83).
Preferred habitat conditions for **pileated woodpeckers** are expected to decrease	The silvicultural treatments promote large tree growth, including large snags in time. Alternatives 2 and 3 would not contribute to a continuation of the loss of LOS habitat, but rather would reverse it (3-22). Large snag recruitment should be assured over the long term (as determined by the DecAID analysis) (3-20 and 3-38 to 3-52).
Some loss of snags may decrease **pine marten habitat**.	In general, the activities are not within pine marten habitat. Overall, both positive and negative effects from the action alternatives are noted in Chapter 3 (3-23).
Preferred habitat conditions for **black-backed woodpeckers** can be expected to decrease.	Snag retention strategies are designed to match the reference conditions in DecAID. Snag and down levels would exceed LRMP Standards and Guidelines (3-44). The retention areas in Alternative 3 emphasize larger retention patches ranging from 2 to 5 acres in size. This would provide a greater assurance of providing future snag habitat for black-backed woodpecker (3-55)

Table 3: Non-significant Adverse Impacts (Final EA page numbers in parenthesis) (continued)

Resource and Adverse Impact as per EA	Reason the Impact is Not Significant
From B.E. (3-57) **Gray flycatcher, Northern Leopard Frog, Northwestern Pond Turtle**: "May impact individuals or habitat....."	There would be both beneficial and adverse effects. Overall, the actions would not likely contribute to a trend toward federal listing or loss of viability to the population or species (3-57 to 3-64).
Species that prefer more dense understories (**Townsend's warbler, etc**.) may decrease.	The species would remain stable due to the retention of a minimum of 10 percent of the areas treated in retention areas (3-65 to 3-66).
Juniper thinning would decrease nesting habitat for **ferruginous hawks** (3-76). When the trees are removed, **avian species** such as mountain chickadees, Oregon juncos, and chipping sparrows are likely to disappear (Miller, 2001).	Avian diversity and abundance is also shown to remain at high levels in healthy treeless shrub communities (Miller, 2001). Overall, implementing the pattern of treatment and no-treatment should provide for maintaining an adequate distribution of habitat (3-76).
Percent cover (for **Rocky Mountain elk**) would be reduced (3-78).	Overall, both positive and negative effects from the action alternatives are noted in Chapter 3. It is anticipated that elk habitat quality would improve due to improved forage (3-78 to 3-79).
Treaty Right Resources Short term loss of **cover for mule deer** Mule deer are a treaty right resource. Inadvertent negative impacts (to **cultural and heritage resources**) are possible anytime ground-disturbing activities occur (3-182).	Although cover would be reduced in the short term along Bridge Creek, Buck Creek, and Thirteen Mile drainage, it is expected that riparian vegetation would increase and expand developing more suitable fawning habitat, forage, and hiding cover over time (3-182). Cultural resource surveys were completed with transects spaced at 20-meters or less apart. All significant cultural resources located in past and more recent surveys will be protected through avoidance or other project design methods. (3-178). Protective measures pertaining to Heritage Resources are included in Chapter 2 (2-24 to 2-25).
Sediment production or increases in stream temperatures would be produced through prescribed burning operations ..... (there could be) Direct water quality impacts of the proposed stream enhancement and culvert replacement activities (3-238). The construction of temporary road could have a local, short-term impact on soil displacement and compaction.	Overall, both positive and negative effects from the action alternatives are noted in Chapter 3. Long-term effects will be beneficial. INFISH Riparian Management Objects would be attained (3-242). The amount of sediment delivered to streams in the short term is expected to be at an immeasurable level and is expected to be reduced in the long term (3-244). Project Specific Protection Measures listed in Chapter 2 would reduce this risk to a minimal level, as no fire would enter the valley bottoms associated with any fish-bearing streams (3-243). Temporary roads are outside of perennial stream influence zones and would not have an adverse effect to water resources (3-201). Temporary road construction will follow the BMPs for roads, thereby mitigating potential sediment inputs to streams (2-22).

Table 3: Non-significant Adverse Impacts (Final EA page numbers in parenthesis) (continued)

Resource and Adverse Impact as per EA	Reason the Impact is Not Significant
Both pile-burning and scatter burning will result in short-**term nitrogen loss and negatively effect soil microbiotic** populations (3-194).	Generally, these effects are short-term and result in a net-gain of nitrogen-fixing vegetation and microbes. Loss due to surface volatization would rebound rapidly and result in long-term fertility increases (3-194 and 3-195). By using selected BMPs and Fremont NF Soil Productivity Guidelines, soil compaction levels remain within Regional and LRMP guidelines (3-193)
In the short-term, there may be some negative effects to ***Penstemon glaucinus* habitat** from machinery during the management activity (3-261).	*Penstemon glaucinus* has a favorable response to disturbance (2-24). In the long term, the occupied habitat would benefit and therefore, this project may impact individuals or habitat, but will not likely result in a trend toward federal listing or reduced viability for the population or species (3-261 and 3-264).
Ground disturbing activities increase the amount of open disturbed habitat available for infestation and heighten the chance for introduction of **noxious weed** seeds (3-275)	Specific measures have been included in project design to minimize introduction of noxious weed (2-23 to 2-24 and Appendix B). Overall, both positive and negative effects from the action alternatives are noted in Chapter 3. Performing fuels reduction activities would reduce the future risk for a high severity fire, which creates noxious weed habitat (3-275).
Dust and vehicle emissions can temporarily reduce **air quality** in the immediate vicinity of machinery operations (3-163).	Impacts from dust and vehicle emissions would be short-term and temporary in nature (3-163). All prescribed burning should be done when atmospheric conditions favor good air quality, good plume rise, and dispersion, as forecasted by the National Weather Service (3-164).
Short term effects in **Inventoried Roadless Areas** would include visible stumps and slash ....and an increase in short-term localized noise (3-290)	Alternative 3 proposes considerably less acres of riparian enhancement treatments. Alternative 3 would reduce the risk of stand replacing fire within the project area, including the areas adjacent to the two IRAs, and would help protect the scenic quality unique to the IRAs (3-292).
In the short term, the increased numbers of stumps would likely be the most apparent **visual** change (3-284).	Reduced risk of stand replacing fire would help protect the natural integrity, special features, apparent naturalness, and scenic quality (3-291 to 3-292). All effects are consistent with the direction in the LRMP.

EA Chapter 2, supplemented by Appendix B, provides a detailed list of all design features, resource protection measures, and mitigation measures included in the selected Alternative. These protection measures pertain to wildlife, aquatics and soils, botany (including noxious weeds) and cultural resources. Together, as supported by the analysis in Chapter 3, these measures insure the potential effects of the alternatives remain at the level of insignificance. Additional measures, which would have further reduced some of the effects above, were considered, but not adopted because of the need to balance attainment of purpose and need with the consideration of the short term effects or the long term "trade-off" of beneficial and adverse effects. For example, a measure could have been adopted that would have eliminated all adverse effects in relation to sediment. However, that would have meant foregoing the use of prescribed fire in certain locations that are in immediate need of establishing a lower risk fuels condition In addition, it would have meant the deferral of some of the instream activity (i.e. LWD placement) that is need to provide long term riparian benefits.

2. Degree of Effect on Public Health and Safety (40 CFR 1508.27 (b)(2)). Modified Alternative 3 will not significantly affect public health or safety. No significant effects to public health or safety have been identified. This finding is supported by knowledge of past similar projects in which no effects to public health or safety have occurred. The project could lead to a slightly beneficial effect upon public health and safety because of long-term reduction in intensity of future wildfires in the project area. The felling of danger trees along roads could also have a beneficial effect upon public health and safety. Effects on safety are discussed in the EA (page 3-295).

3. Unique Characteristics of the Geographic Area (40 CFR 1508.27(b)(3). There will be no significant effects on historic or cultural resources, parklands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas. All known historic or cultural resources have been avoided by project design (EA, page 3-178 and April 3, 2007 certification by Forest Archeologist under SHPO Programmatic Agreement). The area does not contain parklands, prime farmlands, or wild and scenic rivers. Riparian Enhancement actions, including non-commercial thinning, use of prescribed fire and 46 acres where commercial timber would be removed, are all designed to promote the attainment of INFISH Riparian Management Objects (3-246 to 3-247). The proposed alternatives would have no impact on floodplains or wetlands as described in Executive Orders 11988 and 11990 (3-297). Adherence to INFISH (1995) direction provides the mechanism by which the Forest Service complies with the Executive Orders.

4. Degree to which the effects on the quality of the human environment are not likely to be highly controversial (40 CFR 1508.27(b)(4)). The effects on the quality of the human environment are not likely to be highly controversial. These types of activities have taken place on the Silver Lake and Paisley Ranger Districts in similar areas and the resulting effects are well known and understood. In that sense, there is no known scientific controversy over the impacts of the project. CEQ guidelines relating to controversy refer not to the amount of public support or opposition, but to where there is a substantial dispute as to the size, nature, or effect of the action.

An area of prospective scientific controversy, the most effective upper diameter limit for thinning projects, was introduced during public scoping and reiterated during the 30-day comment period for this project. Consideration of this topic is detailed in EA, Chapter 2, and summarized earlier in this Decision Notice (see "Alternatives with Lower Diameter Limit and/or Retention of "Small Diameter Old Growth"). Additional consideration is documented in EA Chapter 4 under "Content Analysis Summary". Briefly, a comment, citing Mason, et al. (2003) suggested that "The best available information indicates that the existence of brush and trees under 12 inches tend to contribute most to fire hazard (by increasing ground and ladder fuels) whereas retention of trees over 12 inches dbh can actually reduce fire hazard."

Mason et al. compared five distinct prescriptions in relation to their effectiveness for fire risk reduction. I note that the *12 inches dbh and above* prescription in the Mason et al. study is very dissimilar to the Bridge/Buck prescriptions. The Mason *12 inches dbh and above* study example favors taking the largest trees and removed nothing smaller than 12 inches dbh. Mason refers to this approach, using a term from past harvest practices, as high-grading. The Bridge/Buck proposal will favor leaving, not taking, the largest trees, and taking, not leaving, the smallest trees. The thinning proposed in Bridge/Buck is similar to the "Leave 45 sq ft BA, From Below (*BA 45*)" prescription studied by Mason. That study concluded that the BA 45 prescription had the best overall fire risk reduction performance. Considering this, the prescriptions for Bridge Buck are generally supported by

Mason et al, though that study did not include an "alternative" that was identical to those analyzed in Bridge/Buck.

In considering the findings and recommendations contained in over 250 publications, the analysis followed a site-specific, science-based process, as documented in the EA. Findings in the EA are specifically referenced to a broad-based body of source materials (see EA, Chapter 4, References). In addition, 47 publications used as reference by the public during the 30-day comment period were considered and evaluated (see Chapter 4 *Literature Cited in Comment Letters;* and in the planning record, or on the WWW at http://www.fs.fed.us/r6/frewin/projects/analyses/bridgebuck/index.shtml, a 25-page documentation of the evaluation (2007_03_24_Response_to_Comments_Sec.2_citations.doc).

Given the site-specific conditions and impacts disclosed in the EA (pages 3-1 to 3-297), the effects of implementation of this decision on the quality of the human environment are not likely to rise to the level of scientific controversy as defined by the Council of Environmental Quality.

5. **Degree to which the Possible Effects on the Quality of the Human Environment are Highly Uncertain or Involve Unique or Unknown Risks** (40 CFR 1508.27(b)(5)). The selected alternative does not impose highly uncertain, or involve unique or unknown, risks. The Forest Service has considerable experience with the types of activities to be implemented. The activities proposed in this decision are well-established land management practices. The risks are well known and understood. Based on previous similar actions, the probable effects of this decision on the human environment, as described in the EA, do not involve effects that are highly uncertain or involve unique or unknown risks.

6. Degree to which the Action May Establish a Precedent for Future Actions with Significant Effects or Represents a Decision in Principal about a Future Consideration (40 CFR 1508.27(b)(6)). Modified Alternative 3 does not set a precedent for other projects that may be implemented to meet the goals and objectives of the Forest Plan, nor does it represent a decision in principle about a future consideration (40 CFR 1508.27(b)(6)). While potential future actions (such as the ability to re-introduce prescribed fire) will be facilitated by this action, this action does not necessarily lead to or require any of future action.

7. Whether the Action is Related to Other Actions with Individually Insignificant but Cumulatively Significant Impacts (40 CFR 1508.27(b)(7). The actions authorized by the Decision Notice are not related to other actions with individually insignificant but cumulative significant impacts. The EA (Appendix A) provides a tabular display of all activities that already have occurred. A February 16, 2006 Decision Memo authorized juniper and ponderosa pine stringer thinning on approximately 253 acres of National Forest System lands (T. 29S., R. 13E., Sec. 19-21, 29-30), plus 226 acres of juniper thinning on adjacent private ownership land (T. 29S., R. 13E. Sec. 16). This is expected to occur in 2007. The analysis in the EA fully considered this future activity and its effects as a part of the action alternatives. Other than the juniper project, the only other relevant reasonably foreseeable future activities in the analysis area would be potential juniper thinning projects on the BLM managed areas in the Bridge and Buck Subwatersheds (see EA page 3-77). The analysis in the EA does consider the prospect for future biomass operations (see EA Chapter 2 and page 10 of this Decision Notice), though no biomass facilities or agreements are currently in effect that would result in such an operation at this location. There will be no significant cumulative effects to:

Wildlife (discussed by species as follows):
- mule deer, EA pages 3-18 to 3-19
- three-toed woodpecker, EA page 3-55 to 3-56
- red-naped sapsucker, EA pages 3-26 to 3-27
- snag and cavity dependent species, EA pages 3-52 to 3-53
- goshawk, EA pages 3-7 to 3-9
- pine marten, EA page 3-23 to 3-25
- pileated woodpecker, EA pages 3-21 to 3-22
- gray flycatcher, EA page 3-59 to 3-61
- Neotropical migratory birds, EA pages 3-66 to 3-68
- northern leopard frogs, EA page 3-62
- northwestern pond turtles, EA 3-63 to 3-64\
- old growth and connectivity corridor habitat – EA pages 3-70 and 3-74
- Rocky Mountain Elk- EA page 3-79
- juniper habitats – EA, page 3-77

Vegetation, including spread of noxious weeds - EA pages 3-109 to 3-115; 3-275
Hydrology - EA pages 3-206 to 3-209
Fuels - EA Pages 3-138 to 3-139; 3-141 to 3-142; 3-148 to 3-149
Cultural Resources - EA pages 3-179
Soils – EA pages 3-195 to 3-196
Fish - EA pages 3-245 to 3-246
Non-forested vegetation and Range – EA pages 2-235 to 2-236 and 3-253 and 3-256
Sensitive Plants – EA pages 3-262 to 3-263
Recreation and Scenery – EA pages 3-286 to 3-287
Unroaded areas - EA pages3-292 to 3-293

8. Degree to which the Action may Adversely Affect Districts, Sites, Highways, Structures, or Objects Listed on the National Register of Historic Places or May Cause Loss or Destruction of Significant Scientific, Cultural, or Historic Resources (40 CFR 1508.27(b)(8). Cultural resource field surveys have been completed for all portions of this project that are authorized by the Decision Notice. The activities selected for implementation will not adversely affect districts, sites, highways, structures, or objects listed in, or eligible for, listing in the National Register of Historic Places or cause loss or destruction of significant scientific, cultural or historical resources. This is because all known sites have been avoided and any sites discovered during implementation of the project will be avoided (EA pages 3-178 and 2-24 to 2-25). Under the auspices of the June 2004 Programmatic Agreement with the State Historic Preservation Officer (SHPO), the Forest Archaeologist has certified that historic properties will be avoided through the current design of the project.

9. Degree to which the Action may Adversely Affect an Endangered or Threatened Species or its Critical Habitat (40 CFR 1508.27(b)(9). The selected actions associated with the project are not likely to significantly adversely affect any endangered, threatened, or sensitive terrestrial wildlife species, aquatic species, plant species, or designated critical habitat under the Endangered Species Act of 1973 based on the following information from biological evaluations and assessments prepared for this project:

Plants: 26 vascular plant species and 12 non-vascular plant species were considered for potential impact by the project. All plants were determined by the Sensitive Plant Species Biological Evaluation to be “no impact” or “project may impact individuals or habitat, but will not likely

result in a trend toward federal listing or reduced viability for the population or species." See EA, pages 3-261 to 3-265.

Aquatic Wildlife: The Biological Evaluation, summarized in the EA (page 3-247) concluded "On the basis of the above evaluation, if the project is implemented as described in the project proposal, implementation of the preferred alternative associated with the Bridge/Buck Restoration Project is **Not Likely to Adversely Affect** redband trout. The project may proceed as planned. The proposed project **may impact individuals or habitat of redband trout** however, this project is not likely to result in a trend toward federal listing or loss of viability of Region 6 sensitive fish species, redband trout."

Terrestrial Wildlife: 16 terrestrial species that are listed as Sensitive, two species that are "candidate" species and two that are listed as threatened were evaluated. Conclusions ranged from "No Impact" to "may impact individuals or habitat, but will not likely result in a trend toward federal listing or reduced viability for the population or species" to "No Effect ". See EA, pages 3-57 to 3-58.

10. Whether the Actions Threatens a Violation of Federal, State, or Local Environmental Protection Law (40 CFR 1508.27(b)(10). This decision is in compliance with relevant Federal, State, and local laws, regulations, and requirements designed for the protection of the environment (40 CFR 1508.27(b)(10). Applicable laws and regulations were considered in the EA (see Chapter 3 sections, by resource, under the heading "Regulatory Framework").

My decision to implement the projects as described in Modified Alterative 3 is consistent with the intent of Forest Plan management direction (goals, desired conditions, standards, guidelines). The project was designed in conformance with Forest Plan standards and incorporates appropriate Forest Plan guidelines specifically for snags, down woody material, big game habitat, riparian habitat, streams, and timber harvest. In evaluating the information presented in the EA, it is my judgment that projects elements were developed particularly with regard to the goals and standards detailed for the following management areas (which represent the allocations found within the project area – See EA, Chapter 1, pages 1-9 to 1-13):

MA 1: Mule Deer Winter Range – (see also FONSI for FP Amendment # 29 below)
MA 5: Timber and Range Production (amended by Regional Forester's Eastside Forest Plan Amendments #1 and #2)
MA 9: Semi-Primitive Recreation
MA 3 and 14: Old-Growth Dependent Species Habitat
MA 15: Fish and Wildlife Habitat/Water Quality (amended by INFISH)

FINDING OF NON-SIGNIFICANCE (for site-specific Forest Plan Amendment #29)
My decision includes a non-significant Forest Plan amendment to the Fremont National Forest Land and Resource Management Plan.

The amendment, as a result of non-commercial riparian thinning in specific locations on winter and transition ranges, reduces the standards for cover on these ranges within the Bridge Creek and Buck Creek Subwatersheds Restoration Project Area below Forest Plan standards and guidelines. This would modify the standards and guidelines for Mule Deer Transition, and Winter Ranges, as described

on pages 109 and 133 of the Forest Plan. This amendment applies only to the area covered by the Project EA.

Analysis of the proposal indicates that 475 acres of winter range cover and 140 acres of transition range cover will become non-cover, primarily as a result of non-commercial riparian enhancement treatments that are designed to promote the immediate and long term recovery of riparian vegetation. This will mean a reduction in percent cover on winter range in the project area from the current 15 percent to 9 percent and on transition range from the current 27 percent to 23 percent.

This amendment will allow proceeding with riparian enhancement treatments that are designed to promote the recovery of riparian vegetation along Bridge Creek, Buck Creek, and the Thirteen Mile Spring drainage. Promoting the recovery of aspen, black cottonwood, willows, and other meadow and riparian vegetation in these areas is consistent with the stated purpose and need for this project ("Restore functional hydrologic processes, including restoration and maintenance of riparian areas to conditions that enhance riparian-dependent resource values"). Although cover will be reduced in the short term, I anticipate that, as a result of these treatments, riparian vegetation will increase and expand developing more suitable fawning habitat, forage, and hiding cover over time. Within these riparian treatment areas located on the winter and transition range, 10 to 15 percent of the area will remain untreated in well distributed leave areas to provide a network of security cover along the riparian corridors.

Prescriptions – This riparian thinning may cut ponderosa pine trees up to 16 inches dbh and lodgepole pine trees up to 21 inches dbh. Riparian management objectives, including retention of future sources of large wood and fuel loading considerations, will be the primary determinants of how much and which conifers will be cut. Both fuels and fisheries personnel, as well as wildlife personnel, will be involved with the layout. *The conifers will be left in place following cutting.* In areas where this would result in fuel loading at levels that present substantial risk to the sustainability of the area, conifers above 12 inches will not be cut.

I have determined that this change to the Forest Plan is not significant, based on NFMA planning requirements and Forest Service handbook direction. Forest Service Handbook (FSH) 1909.12 section 5.32 lists four factors to be used when determining whether a proposed change to a forest plan is significant or not significant: timing; location and size; goals, objectives, and outputs; and management prescriptions. I have considered these four factors in reaching the conclusion that this change is not significant.

Timing: The timing factor examines at what point, over the course of the Forest Plan period, the Plan is amended. Both the age of the underlying document and the duration of the amendment are relevant considerations. The handbook indicates that the later in the time period, the less significant the change is likely to be. This plan amendment is being made as the Forest Plan is about 17 years old and scheduled for revision in the next several years.

Location and Size: The key to the location and size consideration is context or "the relationship of the affected area to the overall planning area" (FSH 1909.12, sec. 5.32(d)). As further discussed in FSH 1909.12, sec. 5.32(d): "the smaller the area affected, the less likely the change is to be a significant change in the forest plan." The amendment only affects a combined area of approximately 615 acres of winter or transition range. The short term loss of cover will be the result of non-commercial thinning of unsustainable conifer forest type in the riparian and nearby adjacent upland zones of the major drainages

in the project area. This will promote an increase in the presence and vigor of appropriate riparian vegetation. This riparian vegetative recovery will provide sustainable, high quality fawning habitat, forage and hiding cover. See EA, Chapter 3/Wildlife/Mule Deer for additional discussion.

Goals, Objectives, and Outputs: The goals, objectives, and outputs factor involves the determinations of "whether the change alters the long-term relationship between the levels of goods and services in the overall planning area" (FSH 1909.12, sec. 5.32(c)). This criterion concerns analysis of the overall forest plan and the various multiple use resources that may be affected. There is no guarantee under NFMA that output projections will actually be produced. The amendment is a part of my decision to restore functional riparian zones and a sustainable ponderosa pine forest in the Bridge/Buck area, and, in doing so, increase the likelihood that future outputs and conditions (wildlife habitat, water quality, desired vegetation conditions, and timber production) will be as desired in the Forest Plan, as amended by INFISH and Regional Forester's Amendments #1 and #2.

Management Prescriptions: A change is more likely to require a significant amendment if it would apply to future decisions throughout the planning area. The amendment associated with this decision is only for the site-specific situation in this project and does not apply to a larger management area.

OTHER FINDINGS

Federal regulations require that permits, contracts, cooperative agreements, and other activities carried out on the Silver Lake Ranger District are consistent with the Fremont National Forest Land and Resource Management Plan (Forest Plan), as amended. I have reviewed my decision against Forest Plan direction, and I have determined that this action is consistent with the goals, objectives, and direction contained in the Record of Decision (ROD) for the Fremont National Forest Land and Resource Management Plan and accompanying Final Environmental Impact Statement (1989). Alternative 3, and, therefore Modified 3, complies with all applicable direction, including both Management Area and Forest-Wide standards and guidelines, Regional Forester's Eastside Forest Plan Amendment No. 2 and the Inland Native Fish Strategy (INFISH, 1995). The project meets the "does not retard attainment" of Riparian Management Objective requirement of INFISH.

The procedures used to initiate and complete the planning of the project are consistent with the 1999 Memorandum of Agreement between The Klamath Tribes and the U.S. Forest Service. The project is not expected to have an adverse effect on Treaty Rights or treaty right resources, other than the short term effects on cover, explained above, along Bridge Creek, Buck Creek, and the Thirteen Mile Spring drainage (EA, page 3-182).

This decision is in compliance with Executive Order 12989 "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations" (EA page 3-294). The project also complies with Executive Order 13112 (invasive species) and Executive Order 11990 (protection of wetlands) (EA page 3-297). Adherence to INFISH (1995) direction provides the mechanism by which the Forest Service complies with Executive Order 11990. Adherence to Regional and Forest direction for the prevention of noxious weeds (see EA pages2-23 to 2-24 and Appendix B; and pages 17 and 18 of this Decision Notice) provides the mechanism by which the Forest Service complies with Executive Order 13112.

This decision is consistent with recent Forest Service Manual direction regarding roads analysis. I have determined that additional roads analysis is not needed for this project because no new Classified Roads will be built.

IMPLEMENTATION, ADMINISTRATIVE REVIEW and APPEAL OPPORTUNITIES
This decision is subject to appeal pursuant to 36 CFR 215. Any written notice of appeal of the decision must be fully consistent with 36 CFR 215.14, "Appeal Content."

The notice of appeal must be filed hard copy with the Appeal Deciding Officer, ATTN: 1570 APPEALS, 333 S.W. First Avenue, P.O. Box 3623, Portland, Oregon, 97208-3623, faxed to (503) 808-2255, sent electronically to appeals-pacificnorthwest-regional-office@fs.fed.us, or hand delivered to the above address between 7:45 AM and 4:30 PM, Monday through Friday except legal holidays. The appeal must be postmarked or delivered within 45 days of the date the legal notice for this decision appears in the Klamath Falls *Herald and News*. The publication date of the legal notice in the Klamath Falls *Herald and News* is the exclusive means for calculating the time to file an appeal and those wishing to appeal should not rely on dates or timeframes provided by any other source.

Electronic appeals must be submitted as part of the actual e-mail message, or as an attachment in Microsoft Word, rich text format, or portable document format only. E-mails submitted to e-mail addresses other than the one listed above, in other formats than those listed, or containing viruses will be rejected. Only individuals or organizations that submitted comments during the comment period may appeal. It is the appellant's responsibility to provide sufficient project- or activity-specific evidence and rationale, focusing on the decision, to show why the Responsible Official's decision should be reversed.

If no appeal is received, implementation of this project will not occur prior to five days after the end of the appeal period, following the date on which the legal notice announcing this decision appeared in the Klamath Falls *Herald and News*.

If an appeal is filed, implementation will not occur prior to 15 days following the date of appeal disposition. If multiple appeals are filed, the disposition date of the last appeal will control the implementation date.

/s/ Richard N. Rine — April 27, 2007

RICHARD N. RINE — DATE
Acting Forest Supervisor
Fremont-Winema National Forests

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Figure 3: Modified Alterative 3