



United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Grants Pass Resource Area
2164 N.E. Spalding
Grants Pass, Oregon 97526

IN REPLY REFER TO:

1790 (ORM070)

SEP 17 2012

Dear Interested Party:

A revised scoping report for the Jumping Bean Project is available for comment and review starting September 17, 2012. The Jumping Bean Project is being designed to meet the Bureau of Land Management's (BLM's) obligation to implement the Medford Resource Management Plan (RMP) and to address the primary needs identified for lands in the Planning Area. **The project's primary objective is to implement forest management activities that would contribute to continuous timber production while restoring dry forest characteristics and reducing wildfire danger.** The Oregon and California Railroad Revested Lands (O&C Act) requires the Secretary of the Interior to manage O&C lands for permanent forest production. The Jumping Bean Project is largely within O&C lands.

Treatment goals are aimed to restore forest resiliency, species composition, and structural heterogeneity of dry forest ecosystems which is characteristic of late-successional forests, and the natural mosaic composition of southern Oregon forests where fire is a natural process of the landscape. The Jumping Bean Project is a dry forest restoration management project that would retain trees generally older than 150 years including legacy trees, oaks, and hardwoods.

Since the release of the February 2012 Jumping Bean Project Scoping Report, the project has been assigned as a Western Oregon Ecological Forestry Project, as announced by Secretary of Interior, Ken Salazar. This Ecological Forestry Project is being designed to be consistent with the Medford District RMP and with the ecological forestry work of Oregon and Washington professors Dr. Norm Johnson and Dr. Jerry Franklin.

The BLM interdisciplinary team has been working with Drs. Johnson and Franklin to re-formulate the project to be consistent with their ecological forestry objectives. Revisions will include consideration of Late Successional Emphasis Areas (LSEAs), as well evaluating as additional where treatments may occur to better meet dry forest restoration objectives.

To meet this objective, the Proposed Action for the project encompasses:

- 708 acres of Variable Density Thinning
- 701 acres of Density Management/Hazardous Fuel Reduction
- 1,034 acres of Hazardous Fuel Reduction

Proposed road work to access timber extraction units includes the following:

- 1.44 miles of temporary route construction
- 0.60 miles of temporary route re-construction
- 2.71 miles of road renovation/improvement

The Jumping Bean Project Planning Area (PA) is north of the city of Grants Pass. The fifth-field watersheds are Jump Off Joe and Grave Creek.

The Jumping Bean Revised Scoping Report may be accessed from (1) the Medford District's internet site at <http://www.blm.gov/or/districts/medford/plans/index.php>; **(2)** if you do not have internet access, or would prefer a paper copy of this document, please contact Michelle Calvert, Planning and Environmental Coordinator, at (541) 471-6505 and she will mail the scoping report to you; or **(3)** paper copies are available at the Grants Pass Interagency Office, 2164 NE Spalding Avenue, 97526. Office hours are Monday through Friday, 8:00 A.M. to 4:30 P.M., closed on holidays.

For a further description of activities, see Chapter 2 (2.1.1 Description of Forest Management Treatments) of the scoping report. The Scoping Report also includes a description of the project location and maps, purpose and need for action, decisions to be made, and the Proposed Action.

We are inviting you to participate in the planning of this project. We are asking you to identify resource concerns not previously considered that you feel are important and why you believe those concerns are relevant to my decision on the selected management options for the locations identified. I encourage you to provide comments to me in writing on the proposed Jumping Bean Project on or before October 18, 2012 at 2164 NE Spalding Avenue, Grants Pass, Oregon 97526. Comments received in response to this letter will be used by the BLM's interdisciplinary team to determine the scope (breadth and depth) of the environmental analysis.

If you would like to be kept informed on the Jumping Bean Project, please state this prominently at the beginning of your comment letter. Those that chose not to respond to this Revised Scoping Report will be removed from further mailings regarding this project. Comments, including names and addresses of those who comment, will be considered part of the public record on this proposed action and will be available for public inspection. Also, names of those who comment may be published as part of the environmental analysis document. Individual respondents may request confidentiality. If you wish to withhold your name or street address from public review or from disclosure under the Freedom of Information Act, you must state this prominently at the beginning of your written comment. Such requests will be honored to the extent allowed by law. All submissions from organizations or businesses, and from individuals identifying themselves as representatives or officials of organizations or businesses, will be made available for public inspection in their entirety.

Jumping Bean Project Public Meeting and Field Trip: The BLM would like to invite you to a public meeting and field trip for this project on October 11, 2012 (Thursday). The public meeting will start at 9am at the Grants Pass Interagency Office, followed by a field trip to visit a sample of proposed project units. Returning time to the interagency office will be 4pm. The public meeting will review the proposed Jumping Bean Project in further detail, collect public input, and have further discussions about the project with those interested. The field trip portion will review and discuss sample treatment types of the project at their proposed location (units).

RSVP is required for the field trip portion by noon of October 4th: Please contact Michelle Calvert, BLM Planning and Environmental Coordinator, at 541-471-6505 or email mcavert@blm.gov so the BLM may plan accordingly. If this date does not work for you, but you are still interested in the public meeting and field trip, please contact Michelle Calvert.

Please bring your own lunch and consider wet weather conditions for clothing. If you do not have a vehicle available to you, please contact Michelle Calvert.

For additional information concerning this proposed project contact Michelle Calvert at 2164 NE Spalding Avenue, Grants Pass, Oregon 97526 or phone (541) 471-6505.

Sincerely,

A handwritten signature in black ink, consisting of a series of connected loops and a horizontal tail stroke.

Allen Bollschweiler
Field Manager
Grants Pass Resource Area

JUMPING BEAN PROJECT REVISED SCOPING REPORT

Chapter 1 – Purpose and Need for the Action

1.1 Revised Proposed Action

The Jumping Bean Revised Proposed Action includes forest management activities on approximately 2,443 acres of forest land. Of these acres the following is proposed: 708 acres of Variable Density Thinning, 701 acres of Density Management/Hazardous Fuel Reduction, and 1,034 acres of Hazardous Fuel Reduction (see Chapter 2 below for definitions of these treatments). The project is an assigned Western Oregon Ecological Forestry Project, as announced by Secretary of Interior, Ken Salazar. This Ecological Forestry Project is being designed to be consistent with the Medford District RMP and in line (or “consistent with”) with the ecological forestry work of Oregon and Washington professors Dr. Norm Johnson and Dr. Jerry Franklin. This dry forest restoration management approach would produce wood for mills and reduce wildfire danger.

The majority of the proposed treatment units are within lands governed by the Oregon and California Railroad and Coos Bay Wagon Road Grant Lands Act (O&C Act). Harvesting and associated forest management activities are planned to start in 2013. BLM planning decisions and harvest activities would apply only to BLM-administered O&C and Public Domain lands.

The Bureau of Land Management (BLM) interdisciplinary team has been working with Drs. Johnson and Franklin to re-formulate the project to be consistent with their ecological forestry objectives. Revisions will include consideration of Late Successional Emphasis Areas (LSEAs), as well as evaluating additional areas where treatments may occur to better meet dry forest restoration objectives, some of which would produce merchantable product and some may not. LSEAs are an important component of Franklin and Johnson’s “Dry Forest Restoration Principles” which retain denser forest patches needed to provide important habitat for many organisms, such as the Northern Spotted Owl (NSO) and some of its prey species. However, LSEAs are not reserves and do not remove lands from the matrix land allocation, the land allocated for timber production in the Medford District RMP (RMP pp. 38-40). For this project, the BLM interdisciplinary team applied LSEAs as a planning tool to identify high value habitat areas in the BLM portion of the Planning Area as part of a landscape level plan. Treatment objectives include reducing the risk of wildfire loss of this high value habitat and identifying thinning treatments within LSEAs that would maintain or promote the development of late successional conditions. LSEAs are used as planning tools applicable to individual projects, but are not Land Use Allocations as defined by the 1994 Northwest Forest Plan and 1995 Medford District Resource Management Plan.

Treatment goals are aimed to restore forest resiliency, characteristic species composition, and structural heterogeneity of dry forest ecosystems which is characteristic of late-

successional forests, and the natural mosaic composition of southern Oregon forests where fire is a natural process of the landscape. The Jumping Bean Project is a dry forest restoration management project that would retain trees generally older than 150 years including legacy trees, oaks, and hardwoods.

The project would also meet the objectives of the proposal to revise Northern Spotted Owl Critical Habitat Unit (U.S. Fish and Wildlife Service 2012) and will be consistent with final Critical Habitat designation, expected in November 2012.

A previous Jumping Bean Project Scoping Report was released for public review on February 13, 2012 which included a Proposed Action of approximately 1,809 acres of forest land: 845 acres of Variable Density Thinning, 610 acres of Density Management/Hazardous Fuel Reduction, and 354 acres of Hazardous Fuel Reduction (see Chapter 2 below for definitions of these treatments).

1.2 Project Location

The Planning Area (PA) is north of the city of Grants Pass. Table 1-1 lists the watersheds and sub-watersheds in the Jumping Bean Project Planning Area.

Table 1-1. Jumping Bean Project Planning Area Watersheds

Sub-watersheds (HUC 6s)	Watershed (HUC 5s)
Upper Jump Off Joe Creek	Jump Off Joe Creek
Middle Jump Off Joe Creek	
Savage Creek	
Louse Creek	
Shanks Creek	Grave Creek

The legal description of the PA is T34S-R6W-Sections 12, 13, 23-27, 33-36; T34S-R5W-Sections 7, 11-15, 18-36; T34S-R4W-18, 19, 30, 31; T35S-R6W-Sections 1-5, 8-17, 21-28, 34-36; T35S-R5W-Sections 1-12, 14-36; and T36S-R6W-Sections 1-3; and T36S-R5W-Sections 1-4, 9-12, 14-16, and 21-22 in Josephine County, Willamette Meridian.

1.3 Purpose and Need for the Proposal

The Jumping Bean Project will be designed to meet BLM’s obligation to implement the RMP and to address the primary needs identified for lands in the Planning Area. The project’s primary objective is to implement forest management activities that would contribute to continuous timber production while restoring dry forest characteristics and reducing wildfire danger. The Oregon and California Railroad Revested Lands (O&C Act) requires the Secretary of the Interior to manage O&C lands for permanent forest production. The Jumping Bean Project is largely on O&C lands.

The objectives of the Proposed Action and consideration of any action alternative would meet the following in the Planning Area:

- Utilize ecological forestry principles and plant communities to restore characteristic structure and composition, ecological conditions, and ecosystem functions.
- Reduce stand density to increase long term tree growth, quality, and vigor of the remaining trees and increase resistance of landscape to fire, drought, and insects.
- Create diversified stand structure (height, age, and diameter classes) to enhance structural complexity and composition which is the result of variability.
- Reduce both natural and activity based fuel hazards through methods.
- Produce a sustainable supply of timber and other forest commodities to provide jobs and contribute to community stability.

1.4 Decisions to be Made

The Field Manager of the Grants Pass Resource Area is the official responsible for deciding whether or not to prepare an Environmental Impact Statement (EIS), and whether to approve the treatments as proposed, not at all, or to some other extent.

Alternative Decision Factors

In choosing the alternative that best meets the purpose and need, the Grants Pass Resource Area Field Manager would evaluate alternatives on:

- silvicultural systems that are sustainable, economically practical, and capable of maintaining the long-term health and productivity of the forest ecosystem;
- providing timber resources and revenue to the government from the sale of those resources;
- providing for the establishment and growth of conifer species while retaining structural and habitat components, such as legacy trees, snags, and coarse woody debris;
- reducing natural and activity based fuel hazards;
- comply with existing right-of-way agreements.

Chapter 2.0 Alternative Ways of Accomplishing the Objectives

2.1 Revised Proposed Action

2.1.1 Description of Forest Management Treatments

Variable Density Thinning (VDT). Treatment goals are based on ecological forestry principles aimed to restore characteristic species composition and structural heterogeneity of dry forest ecosystems. These treatments integrate both thinning prescriptions with retention patches and openings to create a non-uniform distribution of forest structural elements. Such spatial heterogeneity is characteristic of late-successional forests. Treatment accomplishments at the stand level would restore resiliency, structure, and composition to dry forest landscapes.

Thinning prescriptions are incorporated to reduce ladder fuels and the risk of the loss of older trees from wildfire and competition while favoring retention of more fire and drought tolerant tree species (ponderosa pine, sugar pine, incense cedar). Removes mostly small and medium sized trees, but can include removal of some larger young trees. Older trees are defined as those at least 150 years of age.

To avoid homogenous conditions, prescriptions are designed to incorporate gaps ($\pm 15\%$ of the stand) to increase ground cover suitable to the site and growing conditions that provide for the establishment of early seral tree species. These areas would vary in size and shape, but typically would range from $\frac{1}{4}$ to 2 acres in size. In addition, untreated patches, or skips (10-15% of the stand), would be integrated into treatments. Skips would include the utilization of the natural stand features to retain untreated areas of various sizes.

Douglas-fir Series

Dry Douglas-fir stands are typically found on west, southwest, east, and southeast aspects. Douglas fir is the predominant conifer species and ponderosa pine and incense cedar are often present.

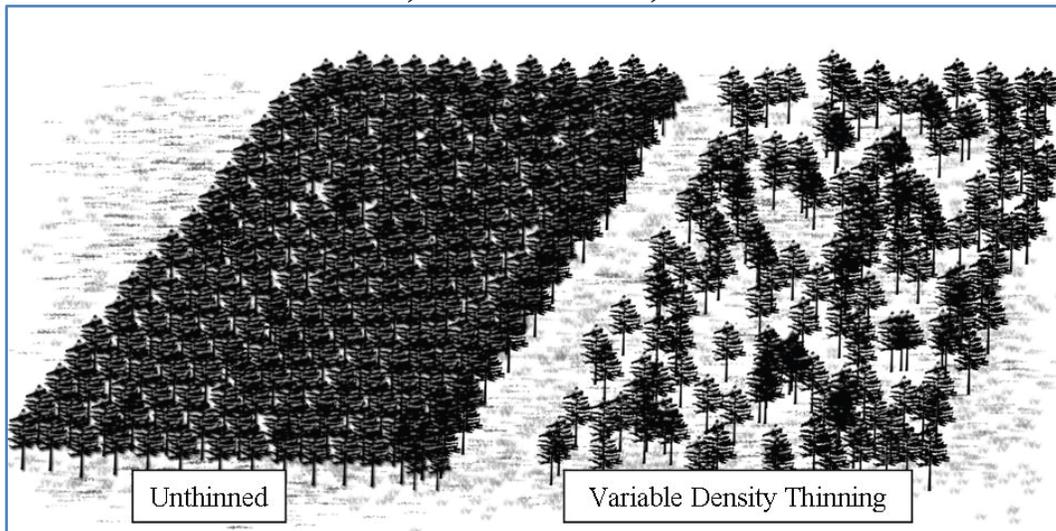
Generally, average stand basal area would range between 80 and 120 ft²/acre (some sites may require slightly lower or higher retention based on productivity e.g., 60 or 140 sq. ft.). Trees greater than 150 years of age would not be cut and hardwoods, ponderosa and sugar pines, and incense cedars would be favored for retention. Competing vegetation and fuels would be removed within twice the drip line length around retention trees.

Portions ($\pm 10-15\%$) of stands would remain untreated to protect and/or provide ecologically key features, habitat, hiding cover, and structure where such natural stand features exist. Gaps ranging from $\frac{1}{4}$ to 1 acre would be created ($\pm 15\%$ of stand, limiting 1 acre openings to every 6 or 7 acres) to stimulate establishment of fire and drought

tolerant tree species (retain structure within gaps such as large conifers and hardwoods). Old-growth pines would be favored to leave in the center of gaps. Low density planting may be appropriate to supplement natural seeding in these areas. Where suitable pine seed trees are prone to wind damage on ridge-tops, the gap size would be decreased to $\frac{1}{4}$ acre and 100 ft^2 basal/acre would be present around the opening, if available. The position of pine seed trees would be varied in gaps to provide shade for future tree development. Around gaps, an 80 ft^2 basal/acre would be present and the width of this area would be the average tree height of the stand. Gap edges would be separated by at least 150 ft.

On dry ridges and lower productive sites, especially where manzanita is found, no more than 80 ft^2 basal/acre would be left, favoring ponderosa pine, incense cedar, sugar pine, and Douglas-fir, respectively.

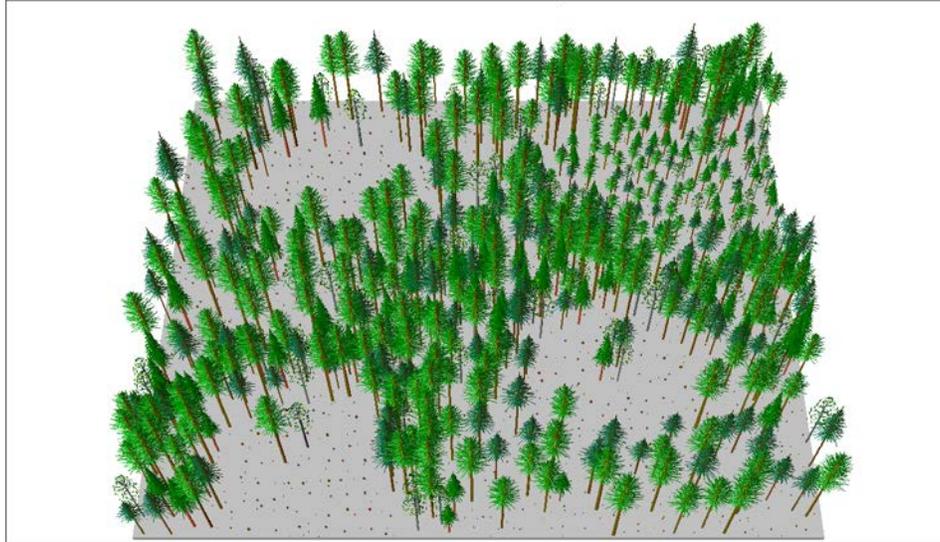
***Visual Representations for Variable Density Thinning:
Current conditions, Post-treatment, and Desired Conditions***



Variable Density Thinning. The illustration above represents a planted stand before thinning (at left) and after variable density thinning (at right). **Source:** Franklin et al. (GTR NRS-19, 2007)

The stand at left is experiencing competition for resources (such as light, nutrients, water, space). If no thinning were to occur, these stands would remain in stand exclusion (loss of a developed understory and midstory, spindly trees exhibiting growth suppression and susceptible to disease, mortality, and windthrow).

Stand Visualization System



Variable Density Thinning. The illustration is created from a forest growth and yield modeling program to represent variable density thinning. In this case the treatment creates $\frac{1}{4}$ to 1 acre gap openings so that $\pm 15\%$ of the stand has structural heterogeneity to stimulate the establishment of fire and drought tolerant early seral species, and to enhance the development of legacy structures such as this ponderosa pine. **Source:** Rolf Gersonde

Density Management (DM) – Treatment goals are meant to reduce stocking levels throughout the stand and promote growth and structural development of residual trees. Pre-

commercial thinning and Pre-commercial/Hardwood Control are generally used with this treatment, which may be completed in conjunction with hazardous fuels reduction.

Hazardous fuels reduction slash would be treated using one or more of the following actions: lop & scatter, pile & burn, chipping, or biomass utilization. Maintenance underburning is generally performed within 7 years following initial treatments and would be driven by the condition of the stand and re-growth of slashed vegetation.

Visual Representations for Density Management: Current conditions



Density Management. The photograph above shows a stand at risk for a high severity crown fire. By thinning from below, targeting ladder fuels, and creating space between the crowns of overstory trees such as the large ponderosa pine pictured here, the fuel hazard would be reduced. In Dry Forests, stand variability is the result of low and mixed severity disturbance regimes. The goal of restoring spatial heterogeneity requires actions that create a non-uniform distribution of forest structural elements.

Riparian Thinning. *The objective of riparian thinning treatments is to accelerate the development of late-successional stand conditions, such as older forest stand characteristics, increasing conifer growth rates and larger remnant conifers and hardwoods.*

Some riparian areas in the Jumping Bean Project are currently dominated by smaller diameter Douglas-fir and some hardwoods. Most are lacking large wood debris, downed logs, and large tree structure. Like treatment in the uplands, treatment of these areas would reduce competition on the retained trees for light, nutrients, water and growing space. These trees would develop larger canopies, display better vigor and put on diameter growth faster than if left untreated. Production of wood volume would be a by-product of this treatment, not a primary objective.

Riparian Thinning in Riparian Reserves would be selected based on field stream survey information and silvicultural review where it would benefit perennial and intermittent fish and other aquatic species habitat. Stands with conditions such as high conifer

density and few canopy layers, stands with low species diversity and stands of low conifer and hardwood vigor would be high priorities for treatment. Treatments would occur in accordance with the following prescriptions to ensure protection of streams.

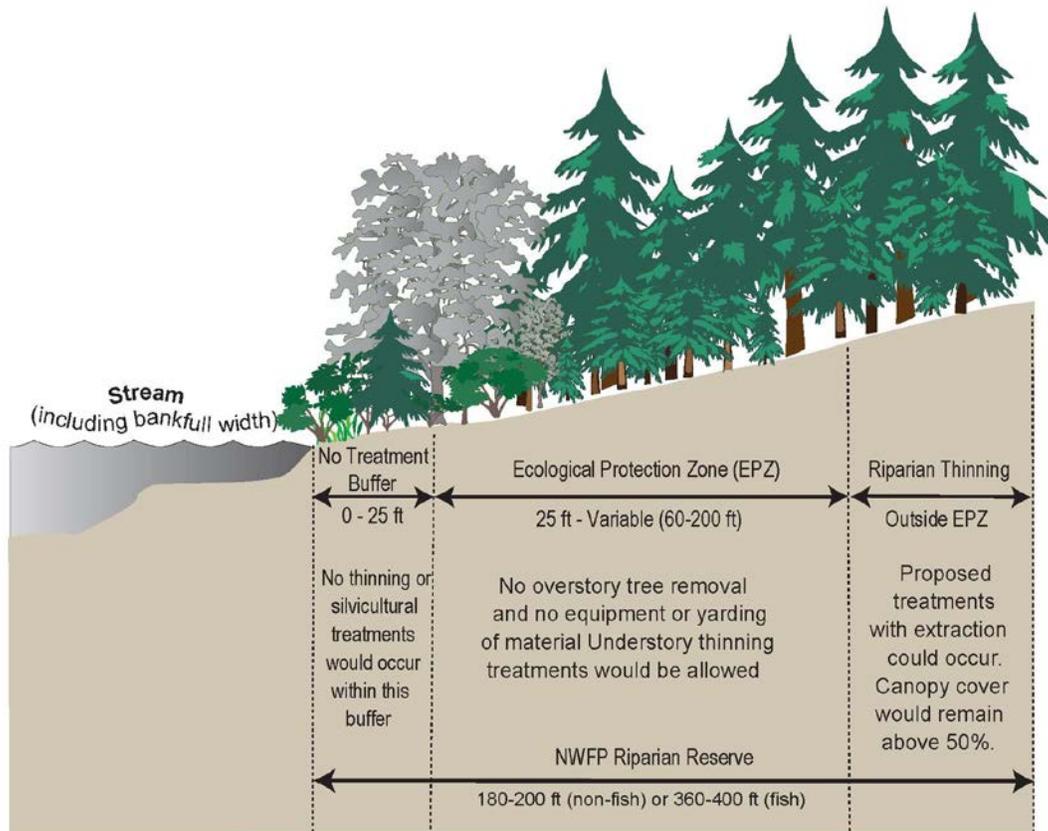
For units where Riparian Thinning would be proposed, an Ecological Protection Zone (EPZ) (a no treatment buffer) would be applied along streams to protect stream channel structure and water quality (Best Management Practice, RMP p.154). The specific EPZ distance per stream would be developed using site specific field information and stated protection criteria¹ for individual elements of the Riparian Reserve including: bankfull and flood stage streambank stability; shade and temperature; surface erosion of streamside slopes; fluvial erosion of the stream channel; soil productivity; habitat for riparian-dependent species; the ability of streams to transmit damage downstream; the role of streams in the distribution of large wood to downstream fish bearing waters; and riparian microclimate. The Ecological Protection Width Needs chart is based on slope and rock type, and takes into account protection of streams from “surface erosion of streamside slopes, fluvial erosion of the stream channel, soil productivity, habitat for riparian-dependent species, the ability of streams to transmit damage downstream, and the role of streams in the distribution of large wood to downstream fish bearing waters”.

Treatments within the Riparian Reserve that are outside the variable width ecological protection zone would be done to promote forest health as discussed above. Canopy cover would remain above 50%, and species diversity would be maintained. Activities in this area would be designed to ensure that habitat conditions for the wildlife and plant species that use this zone are not degraded.

Where field verified EPZs are not established, extraction harvesting activities would not occur in Riparian Reserves.

¹ Ecological Protection Width Needs chart (Northwest Forest Plan Record of Decision, p. B-15); **Forest Ecosystem Management Assessment Team** (FEMAT) 1993; and the Northwest Forest Plan Temperature Total Maximum Daily Load (TMDL) Implementation Strategies, U.S. Forest Service and BLM, 2005).

Riparian Thinning and Riparian Management Adjacent to Streams within the Jumping Bean Project, Illustrated



Specific Ecological Protection Zone distances will be provided in the environmental analysis document for public review. Areas under consideration for Riparian Thinning are currently under development.

Hazardous fuel reduction. Designed to reduce the existing fire hazard by thinning the understory of a stand to reduce the amount of surface and ladder fuels present.

The desired future condition for fuels would be a reduction in ladder fuels that pose a risk of crown fire initiation, discontinuous fuel concentrations, and a minimized presence of fine fuels. Treatments include slashing, hand-piling, pile-burning, chipping, biomass removal, and/or underburning. Slashed material would be up to 8 inches in diameter and conifer spacing would be approximately 18 x 18 feet, and hardwood spacing would be up to 40 x 40 ft or narrower depending on hardwood size class. Fuels reduction would not be permitted within 25 feet of the stream bankfull width. Maintenance underburning is generally performed within 7 years following initial treatments and would be driven by the condition of the stand and re-growth of slashed vegetation.

Activity fuel treatments. Trees to be removed for harvest would be whole-tree yarded or yarded with tops attached. Slash would be treated using one or more of the following actions: lop & scatter, pile & burn, chipping, or biomass utilization. Slash generated

from whole-tree yarding would be brought to the landing where it would be piled and burned, chipped, or otherwise removed from the site.

Temporary Route Construction. Short-term overland roads, primitive roads or trails authorized or acquired for the development, construction or staging of a project or event that has a finite lifespan. Temporary routes are not intended to be part of the permanent or designated transportation network system. Temporary routes would be decommissioned after harvesting and activity fuels are treated for this project. Road decommissioning for this project would involve blocking roads, subsoiling the road surface to allow for water filtration, installing waterbars, and applying seed and mulch. Waterbars would filter water runoff and direct drainage off the road surface and away from streams and into vegetation that is adequate to slow surface water, and allow for deposition of detached soil particles. Mulching helps minimize surface erosion and seeding helps to establish vegetation re-growth.

Temporary Route Reconstruction. Restores an existing road to its original or modified condition. Reconstructed routes would be decommissioned after harvesting and activity fuels are treated for this project.

Road Renovation/Improvement. Restore or improve a road to a desired standard. Typical road renovation/improvement would include, but is not limited to: raising or sloping the road subgrade; reconstructing culvert catch basins; adding necessary drainage facilities and armoring; replacing undersized culverts and repairing damaged culverts and downspouts; adding culvert outlet features as needed such as downspouts and energy dissipators; restoring inslope or crown of road.

Road Maintenance. Activities on an existing road to keep a road at its original design standard. Typical maintenance would include, but is not limited to: blading and shaping; cleaning of ditches, catch basins and culverts; brush cutting and vegetation removal from roadway; surface patching and pot hole repair; surface replacement; culvert replacement; and slide removal.

2.4 Description of the Revised Proposed Action

The objective of the Proposed Action is to restore forest characteristics of dry forests while producing wood for mills and reducing wildfire danger. For specific locations see the enclosed maps.

2.4.1 Forest Management

The Proposed Action would treat 708 acres by variable density thinning in 33 units, 701 acres by density management/hazardous fuel reduction in 17 units, and 1,034 acres by hazardous fuel reduction in 31 units. See table 2-1 for further details. Tree extraction would not be prescribed in Riparian Reserves.

2.4.2 Timber Yarding

Harvest yarding systems would be the use of skyline cable and tractor yarding. Trees to be removed for harvest would be whole-tree yarded or yarded with the tops attached to minimize impacts. See table 2-2 for individual unit harvesting methods proposed. Tractor yarding would generally be limited to slopes less than 35%.

Table 2-1. Jumping Bean Project Forest Management Units

Township-Range-Section	Unit Number	Acres	Proposed Treatment
T34S-R5W-Section 13	13-12	36	DM/HFR
	13-3	31	HFR
T34S-R5W-Section 14	14-1	55	DM/HFR
	14-2	33	DM/HFR
	14-3	27	HFR
	14-4	9	DM/HFR
	14-5	42	HFR
	14-7	16	HFR
	14-8	41	HFR
	14-8A	11	HFR
	14-9	16	HFR
T34S-R5W-Section 15	14-10	21	HFR
	15-11	49	DM/HFR
	15N-15	40	HFR
	15-22	57	HFR
T34S-R5W-Section 19	15-24	92	DM/HFR
	19-10	21	VDT
	19-11	14	VDT
T34S-R5W-Section 20	19-11A	19	VDT
	20-1	9	VDT
	20-10	11	HFR
	20-10A	17	HFR
T34S-R5W-Section 21	20-13	7	VDT
	21-1	48	DM/HFR
	21-3	27	HFR
	21N-2	94	HFR

Legend

VDT = Variable Density Thin HFR = Hazardous Fuel Reduction
PCT = Pre-Commercial Thin DM = Density Management

Township-Range-Section	Unit Number	Acres	Proposed Treatment
T34S-R5W-Section 21	21N-4	13	VDT
T34S-R5W-Section 23	23-1	55	DM/HFR
	23-9	11	DM/HFR
	23-10	21	HFR
T34S-R5W-Section 28	28-11	62	DM/HFR
	28-17	23	DM/HFR
T34S-R5W-Section 29	29-11	14	VDT
T34S-R5W-Section 30	30-4	20	VDT
T34S-R5W-Section 33	31-1A	16	VDT
	31-1B	37	VDT
	33-1	32	HFR
	33N-11	27	HFR
	33-14	15	HFR
	33-15	19	HFR
T35S-R5W-Section 4	4-3	5	VDT
	4-4	17	VDT
T35S-R5W-Section 8	8-2	27	VDT
	8-3	47	HFR
T35S-R5W-Section 9	9-2	17	VDT
	9-2A	24	HFR
	9-14	11	VDT
	9-15	14	VDT
T35S-R5W-Section 10	10-1	23	HFR
	10-2	7	VDT
T35S-R5W-Section 11	11-20	8	VDT
	11-29	9	VDT
T35S-R5W-Section 15	15-1	24	VDT
	15-6	41	DM/HFR
	15-13	12	VDT
	15-13A	18	DM/HFR
	15-15	43	VDT
T35S-R5W-Section 17	17-4	40	VDT

Legend

VDT = Variable Density Thin HFR = Hazardous Fuel Reduction
PCT = Pre-Commercial Thin DM = Density Management

Township-Range-Section	Unit Number	Acres	Proposed Treatment
T35S-R5W-Section 20	20-2	16	VDT
T35S-R5W-Section 21	21-1	31	DM/HFR
	21S-2	22	VDT
	21S-4	89	HFR
	21-10	9	VDT
	21-11	15	VDT
T35S-R5W-Section 21	21-12	48	DM/HFR
	21-13	28	VDT
	21-15	9	VDT
T35S-R5W-Section 22	22-1	10	DM/HFR
	22-3	80	DM/HFR
T35S-R5W-Section 23	23-1A	41	HFR
	23-11	16	HFR
T35S-R5W-Section 25	25-7	42	HFR
	25-17	10	VDT
T35S-R5W-Section 27	27-3	107	HFR
	27-4	33	HFR
T35S-R5W-Section 33	33-10	56	VDT
	33-10A	4	HFR
	33-10B	71	VDT
	33S-11	19	HFR
T35S-R5W-Section 35	35-23	24	HFR
T35S-R6W-Section 1	1-2	68	VDT

Legend

VDT = Variable Density Thin HFR = Hazardous Fuel Reduction
PCT = Pre-Commercial Thin DM = Density Management

2.4.3 Road Work

Proposed road work associated with timber harvesting includes 1.03 miles of temporary route construction, 0.60 miles of temporary route re-construction, and 2.71 miles of road renovation/improvement to access proposed timber treatment units consistent with existing right-of-way agreements. All existing and proposed permanent roads used for hauling timber would be maintained.

Table 2-2. Road Work: Temporary Route Construction and Reconstruction (including associated Decommissioning) and Road Renovation/Improvement

Road Work Activities	Road Number	Miles
Road renovation/improvement	into Unit 1-2	0.69
	into Unit 14-1, 14-4, 23-1, and 23-9	1.26
	into Unit 14-8	0.25
	into Unit 31-1A	0.07
	into Unit 4-4	0.19
	into Unit 8-3	0.25
temporary route construction (Decommission after use: Block, subsoil, waterbar, seed, and mulch after use)	into Unit 1-2	0.25
	into Unit 15-15A	0.11
	into Unit 17-4	0.06
	into Units 10-1, 10-2, 15-1, 11-20, 11-29	0.39
	into Unit 31-1B	0.34
	into Unit 33-10	0.23
	into Unit 25-17	0.05
temporary route re-construction (Decommission after use: Block, subsoil, waterbar, seed, and mulch after use)	into Unit 17-4	0.19
	into Unit 4-4	0.26
	into Unit 21N-4	0.07
	into Unit 9-14	0.08

2.4.4 Activity Fuels Treatments

Trees to be removed for harvest would be whole-tree yarded or yarded with tops attached. Slash would be treated using one or more of the following actions: lop & scatter, pile & burn, chipping, or biomass utilization.

2.4.5 Hazardous Fuel Treatments

Hazardous fuel treatments would be implemented on approximately 1,034 additional acres on 31 units where existing vegetation and fuel loading pose a wildfire hazard. Private residences within 1.5 miles of federal land may be classified as being within the Wild and Urban Interface (WUI) area as described by the National Fire Plan. These lands serve to increase the risk of a fire occurring from human causes if left untreated. Unit boundaries may be altered during the layout process to facilitate logistically practical implementation; however, boundary adjustments would not exceed surveyed areas. Hazardous Fuel Reduction would not occur within 50 ft from the stream bankfull width (by slope distance) to protect stream channel structure and water quality as recommended by the Jump Off Joe Watershed (2009) and the Grave Creek Watershed Water Quality Restoration Plans (2001). Treatment implementation is subject to prioritization at the Medford District and Grants Pass Resource Area levels and may be affected by funding availability.

Table 2-3. Proposed Action Summary

	Proposed Action
Number of units	81
Acres of VDT (Douglas-fir series)	708
Acres of DM/HFR	701
Acres of HFR	1,034
Total treatment acres	2,443
Roads (Miles)	
• temporary route construction	1.03
• temporary route re-construction	0.60
• road renovation/improvement	2.71

2.5 Project Design Features

Project Design Features (PDFs) are specific measures included in the site specific design of the project to eliminate or minimize adverse impacts on the human environment. These initial PDFs were developed by the Jumping Bean Project interdisciplinary team from management guidance of the 1995 Medford ROD/RMP (Appendix D), BLM Information Memorandum (IM OR-2011-074 - Incorporating Road and Sediment Delivery Best Management Practices into Resource Management Plans), and other regulatory laws for resource protection measures specific to the Planning Area. Further PDFs may be developed by the BLM interdisciplinary team as the project develops further. The complete PDF list will be provided in the environmental analysis document.

2.5.1 Soil Productivity, Residual Trees, and Coarse Woody Debris

A minimum 20 ft area on the ground would be cleared of slash and other vegetation, litter, and debris, around each landing pile to prevent escaped fire. Each slash pile would be covered with a large enough piece of 4 mm black plastic to ensure a dry ignition spot (up to 10 ft x 10 ft for landing piles or 80% coverage of hand piles).

To minimize scorch and mortality, piles would not be placed adjacent to or within 15 ft of leave trees for landing piles and 10 feet of hand piles. To facilitate desired consumption, landing piles would be as free of dirt as reasonably possible.

Slash piles would not be allowed on roadways, turnouts, shoulders, or on the cut bank.

Lateral yarding would be required on all units to protect residual leave trees and existing conifer regeneration. Yarding carriages would be required to maintain a fixed position during lateral yarding to reduce damage to the residual stand.

All non-hazardous snags would be retained in all harvest units. If it is necessary to fall snags for safety reasons, they would remain on site as down wood. All existing naturally occurring dead and down woody debris would remain on site.

2.5.2 Air Quality / Smoke Management

Prescribed burning would occur under atmospheric conditions that allow for the mixing of air to lessen the impact on air quality. Burning would be conducted in compliance with the Medford District RMP, the Oregon State Implementation Plan, and the Smoke Management Plan as administered by the Oregon Department of Forestry.

Burning of slash piles would occur after a sufficient period of curing (generally over a year) to ensure desired consumption of material and after a period of adequate seasonal moisture to minimize risk of fire escape. Smoke clearance(s) would be obtained prior to ignition to minimize impacts on air quality.

Local residents would be advised of prescribed burning on the Grants Pass Resource Area prior to seasonal burning through news releases.

Use water or approved surface stabilizers/dust palliatives to reduce surfacing material loss and buildup of fine sediment that may wash off into water bodies, floodplains, or wetlands. Prevent entry of road surface stabilizers/dust control additives into waters of the state during application.

2.5.3 Sedimentation and Soil Compaction

Non-emergency road maintenance work shall occur during the dry season (generally between May 15 and October 15). Certain activities (blading of aggregate roads, rocking, brushing, cross drain installation) would be permitted during the wet season (generally Oct 15 -May 15) when conditions are dry. If these activities would occur within 200 feet

of streams, sediment control devices would be placed and maintained as necessary to prevent action related stream sedimentation. When dry conditions are experienced outside seasonal restrictions, coordination with area specialists for agreement on the activity needs to occur. No ditch maintenance shall occur during the wet season unless for safety or resource protection. Work shall be suspended during precipitation events or when observations indicate that saturated soils exist to the extent that there is visible runoff or a potential for causing elevated stream turbidity and sedimentation. Emergency road work may be permitted during the wet season.

Maintain road surface by applying appropriate gradation of aggregate and suitable particle hardness to protect road surfaces from rutting and erosion for wet weather haul where runoff drains to wetlands, riparian management areas, floodplains and waters of the state. If appropriate gradation of aggregate and suitable particle hardness to protect road surfaces cannot be achieved to protect water quality, limit haul to the dry season and/or install and maintain sediment control devices.

Blade and shape roads to conserve existing aggregate surface material, retain or restore the original cross section, remove berms and other irregularities that impede effective runoff or cause erosion, and ensure that during road improvement activities surface runoff is directed into vegetated, stable areas to the extent practical.

Avoid blading and vegetation removal during road maintenance unless necessary to remove drainage impediments when maintaining ditches. Sediment control measures will be evaluated and implemented if necessary, where ditch-line blading is required within 100 feet of streams.

Retain low-growing vegetation on cut-and-fill slopes (i.e. Grasses, ferns).

Avoid undercutting of cut-slopes when cleaning ditchlines. Seed and mulch bare soils including cleaned ditchlines that are hydrologically connected to stream channels. Avoid routine machine cleaning of ditches and blading during the wet season, generally November through May of the next calendar year.

Prior to October 15 of the same operating season, winterize and/or rehabilitate temporary routes, landings, corridors, skid trails and other areas of exposed soils by properly installing and/or using water bars, berms, sediment basins, gravel pads, hay bales, small dense woody debris, seeding and/or mulching, to reduce sediment runoff as directed by the Authorized Officer.

Prior to wet season hauling activities, implement structural road treatments as needed to prevent discernible stream sedimentation from occurring during off season use, such as: increasing the frequency of cross drains, installing sediment barriers or catch basins, applying gravel lifts or asphalt road surfacing at stream crossing approaches, and cleaning and armoring ditchlines.

Inspect and maintain culvert inlets and outlets, drainage structures and ditches before and during the wet season to diminish the likelihood of plugged culverts and the possibility of washouts.

Flowing water would be diverted around each culvert or cross drain installation or replacement site whenever there is sufficient water volume. Diverted water would be returned to the channel immediately downstream of the work site. Effective erosion control measures would be in place at all times during installation or replacement, and would be removed from the channel prior to October 15th of the same calendar year. Stored sediment behind erosion control devices would be removed from channel and disposed of in a stable location outside the EPZ.

Implement sediment reduction techniques such as settling basins, brush filters, sediment fences and check dams to prevent or minimize sediment conveyance to streams.

All natural surface or rocked roads that are re-opened for harvest operations or log haul would be re-closed prior to the wet season, or would receive adequate surfacing for winter use (generally 6-12 inches of clean, compacted rock). If road is closed using a method that would not allow regular restricted access (such as a gate), the road would be blocked and stabilized in such a way that no future maintenance would be necessary to prevent road failure or stream sedimentation.

Ground based logging would not occur when soil moisture at a depth of 4-6 inches is wet enough to maintain form when compressed, or when soil moisture at the surface would readily displace, causing ribbons and ruts along equipment tracks. These conditions are generally found when soil moisture at a depth of 4-10 inches is between 15-25% depending on soil type.

Haul would not occur on hydrologically connected roads when water is flowing in the ditchlines or during any conditions that would result in any of the following: surface displacement such as rutting or ribbons; continuous mud splash or tire slide; fines being pumped through road surfacing from the subgrade and resulting in a layer of surface sludge; road drainage causing a visible increase in stream turbidities, or any condition that would result in water being chronically routed into tire tracks or away from designed road drainage during precipitation events. Hauling on natural surface or rocked roads would not resume for a minimum of 48 hours following any storm event that results in ½ inch or more precipitation within a 24 hour period, and until road surface is sufficiently dry to prevent any of the above conditions from reoccurring, and as approved by the Authorized Officer.

Natural surface and rocked haul routes and related ditchlines that could deliver sediment into Southern Oregon/Northern California Coasts critical habitat would have sediment barriers (e.g. hay bales, silt fence, settling ponds) installed to prevent sediment from reaching these streams. Specifically these sediment barriers would be applied to BLM rds # 39-5-14, 39-5-23, 39-5-25. Sediment barriers would be placed by the purchaser according to specifications and locations outlined by the BLM fish biologist, engineer, and contract administrator. These barriers would be maintained and monitored (Oregon

DEQ Erosion and Sediment Control Manual 2005) by the purchaser and contract administrator during haul route usage.

Ground based yarding would generally be limited to slopes less than 35%.

Off designated skid trails, mechanized harvest equipment would operate on ground less than 35% slope, have an arm capable of reaching at least 20 ft, and minimize turning. If equipment exceeds 6 pounds/square-inch (PSI) ground pressure, the harvest equipment must walk on existing or created slash. This slash mat would be a minimum of 8 inches in depth prior to the equipment moving onto the slash mat. Additional slash would be required on the slash mat, if more than an out-and-back trip is done by the equipment.

Existing skid trails would be utilized whenever practical. New skid trails would be placed at least 150 ft apart, where topography allows, to reduce the amount of compaction within tractor yarded units. New skid trails would be located outside the Riparian Reserve whenever possible and would be pre-designated and approved by the Authorized Officer.

Tractors would not exceed nine feet in width and would be equipped with an integral arch to minimize soils disturbance and compaction. Skid trails including turning points would be 12 ft width on average.

The use of blades while tractor yarding would not be permitted, to minimize soil disturbance and to keep soil organics on site. Equipment would walk over as much ground litter as possible to reduce compaction.

Whole tree yarding with tops attached to the last log would be permitted as long as contractor can operate without causing unacceptable damage from bark slippage, girdling, broken tops, or damage to live crowns. If it is determined by the Authorized Officer that unacceptable amounts of damage is occurring, trees would be required to be bucked and limbed as directed by the Authorized Officer. Delivered log length not to exceed 41 feet.

The number of yarding corridors would be minimized to reduce soil compaction and displacement from cable yarding. Corridors would be located approximately 150 ft apart at the tail end.

At a minimum, partial suspension would be required on all units to minimize soil disturbance. Where feasible, require full suspension over flowing streams, non-flowing streams with erodible bed and bank, and jurisdictional wetlands. Yard with full suspension or one-end suspension where slopes exceed 60 percent along stream channels, using seasonal restrictions.

Temporary route construction, temporary route re-construction (including associated decommissioning), and road renovation/improvement would not occur when soil moisture, at a depth of 4-6 inches, is wet enough to maintain form when compressed; or when soil moisture at the surface would readily displace, causing ribbons and ruts along

equipment tracks. These conditions are generally found when soil moisture at a depth of 4-10 inches is between 15-25% depending on soil type.

All temporary routes and new landings would be rehabilitated (also referred to as decommissioned).

Existing skid trails used for harvest outside Riparian Reserves, would be rehabilitated as needed to reduce the compacted area per unit to less than 12%. All existing skid trails used for harvest in Riparian Reserves would be rehabilitated.

New skid trails would be scarified and stabilized, and intermittently rehabilitated in areas where the roots of leave trees would not be substantially affected. All rehabilitation would occur within 24 months of harvest, and during the dry season when soils at 4-6 inches no longer maintain form when compressed, and soils on the surface do not readily displace under pressure to form ribbons or ruts. Rehabilitated areas would be discontinuously sub-soiled, seeded, mulched, have slash placed over, water-barred, and blocked. For all sub-soiling, a winged ripping device would be used to sub-soil the full width of the skid trail, rips would be no more than 36 inches apart, and would be to a depth of 18 inches or to bedrock, whichever is shallower. All rehabilitation activities that utilize heavy equipment would be required to take place at same time as sub-soiling to prevent machinery from driving back over sub-soiled ground. Waterbar spacing and drainage angles would be based on the NWFP Standards and Guidelines erosion control measures for timber harvest, which considers slope and soil series (RMP, p. 167).

Upon completion of harvest, all existing skid trails utilized during this harvest activity within Riparian Reserves would be discontinuously sub-soiled, seeded, water-barred, mulched and blocked (as per described above for upland skid trails).

Locate landings on stable locations that minimize sediment delivery potential to streams (e.g. ridge tops, stable benches or flats, and gentle-to-moderate side-slopes), in areas with low risk for landslides, and outside jurisdictional wetlands. To the extent workable, avoid unstable headwalls, and steep channel-adjacent side slopes. There would be no new or expanded landings within one site potential tree of perennial streams and springs.

To the greatest, extent practicable, avoid locating new landings in areas that can contribute eroded fines to dry draws and swales. If location cannot be avoided, ensure properly installed sediment control measures are placed and maintained, as needed, to keep eroded material on site.

Divert road and landing runoff water away from headwalls, unstable areas, or stream channels.

Landing piles would be burned, chipped, or otherwise removed from these sites within 18 months of unit harvest completion.

Landings used during dry conditions within the wet season (generally October through May) that have the potential to release sedimentation into a stream or wet area via

ditchlines or other means, would have silt fencing or other sediment control measures in place during periods of non-use if they are hydrologically connected² to streams.

2.5.4 Streams and Riparian Zones

Springs and perennial wet areas would receive a radial buffer that would prohibit any overstory canopy removal or ground disturbance. This buffer would extend outwards from the edge of the riparian vegetation for a distance equal to the EPZ width designated for that unit, or 100 feet (whichever is smaller) in order to protect the ecology of these sites.

Slumps, intermittent seeps, and other unstable areas would be buffered (no treatment) by leaving one row of overstory trees or a 25 ft diameter (whichever is greatest), from the outer edge of instability, around these areas for soil stabilization.

Unless unsafe, trees within Riparian Reserve boundaries (one or two site potential trees) would be directionally felled away from the stream, and upslope trees would not be felled into Riparian Reserves.

Trees in no-harvest portions of Riparian Reserves that are accidentally knocked over during falling and yarding would be retained on site for fish /wildlife habitat.

Suspend any project related activities if conditions develop that cause a potential for sediment laden runoff to enter a wetland, floodplain, or waters of the state.

Prevent diversion of water from streams into road ditches or upon road surfaces.

Cleaning culvert inlets in stream channels should occur during the low flow period (generally June 15 to September 15) in accordance with Oregon Department of Fish and Wildlife (ODFW) in-stream work period guidelines.

Material removed during excavation would only be placed in locations where it cannot enter streams or other water bodies. If side slopes generally exceed 60 percent or where side-cast material may enter waterbodies, wetlands, or floodplains, end-haul excavated material to minimize side-casting of waste material.

² Hydrologically Connected = where drainage features are connected to stream channels via surface water flow routes, including headwater springs. This determination is made with project specific field verified stream surveys to identify where sediment has the potential to be carried to streams; where precipitation and subsurface flows on impermeable road surfaces may be intercepted, concentrated, and carried to stream channels; and where ditchlines are increasing the stream network (for more information see the Jumping Bean Project Record stream surveys and Hydrologically-Connected Roads: An Indicator of the Influence of Roads on Chronic Sedimentation, Surface Water Hydrology, and Exposure to Toxic Chemicals by M. Furniss et al. (USDI, Forest Service Stream Systems Technology Center website at http://stream.fs.fed.us/news/streamnt/jul00/jul00_2.htm).

Cover or otherwise temporarily stabilize all exposed soil. Properly install sediment trapping devices to disconnect site. Resume operations when sediment control devices are in place and conditions all turbidity standards to be met.

During construction, rehabilitation, and winterization of roads, temporary routes, skid trails, and landings divert runoff water away from headwalls, slide areas, high landslide hazard locations or steep erodible fill soils.

Upon completion of harvest, all existing skid trails utilized during this harvest activity within Riparian Reserves would be discontinuously sub-soiled, seeded, water-barred, mulched, and blocked (as described above for upland skid trails).

Prior to winter rains, cable yarding corridors that are above or nearly perpendicular (approximately 60-90 degrees) to stream channels or hydrologically connected to streams via ditchlines, would be waterbarred and have slash placed over them to protect water quality.

When utilizing existing landings that have the potential to release eroded fines into a stream or wet area, directly or via draws or ditchlines, ensure that silt fencing or other sediment control measures are properly placed and maintained during use and periods of non-use, to keep eroded material onsite.

Riparian skid road construction would not occur in RRs, unless field verified EPZs are established. In such a case, skid road construction could occur outside the EPZ, within the remaining portion of a RR.

Expansions of existing landings in the RR would not occur unless field determined EPZs are established; however, expansions of landings would not occur into the EPZ.

Where new skid trail construction is necessary within the Riparian Reserve, new skid trails would either be 1) constructed and used during dry conditions and fully rehabilitated (as described above for upland skid trails); or 2) construction would be restricted to the driest time of the year (generally Aug 1st -Oct 15th, as determined by the Authorized Officer), would be required to walk on slash and as necessary to prevent off-site erosion, skid trails would be scarified, seeded, mulched, slash cover placed, and waterbarred prior to October 15th of the harvest year.

Under-burning operations would be allowed to back into EPZs and riparian no-treatment areas; however, no hand pile ignition would occur in riparian no-treatment areas. Where biomass removal units are adjacent to RRs, no underburning ignition would occur in RRs unless field verified EPZs are established. Where EPZs are established underburning ignition could occur outside the EPZ, within the remaining portion of RR.

Handpile burning operations within the EPZ would not occur concurrently with the implementation of adjacent upslope cable and ground based yarding activities. Underburning would occur one season after handpile burning operations to

ensure that ground vegetation capable of trapping erosion from yarding activities is onsite.

Contractors must prepare a Spill Prevention, Control, and Countermeasure Plan for all hazardous substances to be used in the contract area, as directed by the Authorized Officer. Such plan shall include identification of Purchaser's representatives responsible for supervising initial containment action for releases and subsequent cleanup. Such plans must comply with the State of Oregon DEQ OAR 340-142, Oil and Hazardous Materials Emergency Response Requirements.

Mechanized equipment would be limited to chainsaws in RRs unless field determined EPZs are established. In such a case, mechanized equipment beyond chainsaws could be used outside the EPZ, within the remaining portion of RR.

Hydraulic fluid and fuel lines on heavy mechanized equipment would be in proper working condition in order to minimize potential for leakage into streams. Absorbent materials would be required to be onsite to allow for immediate containment of any accidental spills.

Refueling of chainsaws and heavy equipment would be done no closer than 150 ft of any stream or wet area.

Fire suppression foam would not be used within 150 ft of streams and wetlands.

2.5.5 Special Status and Survey and Manage Plant Species

Bureau Sensitive and Survey and Manage botanical species would be protected by no treatment buffers. More information regarding buffer size will be provided in the environmental analysis document. Buffer sizes are determined by habitat requirements and existing habitat conditions on a case-by-case basis.

Trees would be directionally felled away from all no disturbance buffers.

Prescribed burns would occur during cool, moist weather conditions in units that contain Special Status Species.

2.5.6 Noxious Weeds

All heavy equipment, including brushing machinery, would be pressure washed to remove dirt, grease, plant parts, and material that may carry noxious weed seeds into BLM lands. Pressure washing would include thorough cleaning of the undercarriage in a designated cleaning area or in an equipment yard after loading. Equipment would be visually inspected by the Authorized Officer to verify that the equipment has been reasonably cleaned.

Wash equipment at sites with no potential for runoff into waterbodies, floodplains, or wetlands.

Only equipment inspected by the BLM would be allowed to operate within the Analysis Area. All subsequent move-ins of equipment as described above shall be treated the same as the initial move-in.

Prior to initial move-in of any equipment, and all subsequent move-ins, the operator shall make the equipment available for BLM inspection at an agreed upon location off Federal lands.

Roadside noxious weed populations would be treated prior to project activity with subsequent treatments as necessary and as funding is available.

2.5.7 Wildlife

Northern Spotted Owl (Threatened)

Any of the following measures may be waived in a particular year if nesting or reproductive success surveys conducted according to the U.S. Fish and Wildlife Service (USFWS) - endorsed survey guidelines reveal that spotted owls are non-nesting or that no young are present that year. Waivers are valid only until March 1 of the following year. Previously known well established sites/activity centers are assumed occupied unless protocol surveys indicate otherwise.

Work activities (such as tree felling, yarding, temporary route construction and reconstruction (including associated decommissioning), hauling on roads not generally used by the public, and prescribed fire)) would not be permitted within specified distances (see Table 2-5 below), of any nest site or activity center of known pairs and resident singles between March 1 and June 30 (or until two weeks after the fledging period) – unless protocol surveys have determined the activity center to be not occupied, non-nesting, or failed in their nesting attempt. March 1 – June 30 is considered the critical early nesting period; the restricted season may be extended during the year of harvest, based on site-specific knowledge (such as a late or recycle nesting attempt). If any new owls are discovered during harvest, activities would stop until mitigation options can be determined. Pile burning, underburning, and site preparation would not occur between March 1 and June 30 within ¼ mile of known spotted owl sites. The boundary of the prescribed area may be modified by the action agency biologist using topographic features or other site-specific information. The restricted area is calculated as a radius from the assumed nest site (point).

Table 2-5. Disturbance Distances from Various Activities for Northern Spotted Owls

Activity	Buffer Distance around Owl Sites
Heavy Equipment (including non-blasting quarry operations)	105 feet
Chain saws	195 feet
Prescribed fire	0.25 miles

* These are standard BLM distances for projects to reduce disturbance to spotted owls. The Jumping Bean Project activities will be beyond the 105-195 ft distances.

Raptors

Protect additional raptor species if located and apply the appropriate buffers and seasonal restrictions (distance and season varies by species from ¼ - ½ mile).

Additional Wildlife Habitat

Habitat patches for the benefit of spotted owl prey, songbirds, and other species would be retained. These patches would maintain habitat diversity, a variety of vegetative structure, and utilize unique landscape features in the Planning Area. Where present, landscape features, such as wildlife and botany buffers, hardwood areas, chinquapin patches, rocky outcrops, wet areas, and areas with large woodrat nests, would contribute to or serve as these leave areas. Approximately 10% or more of the planning area would be untreated. Untreated areas would be a minimum of ¼ to ½ acre in size.

2.5.8 Cultural sites

Cultural resource surveys in Planning Area were conducted and site specific protection measures or specific PDFs would be implemented to preserve the integrity of significant cultural resources, referred to as Historic Properties in cultural resource protection laws and regulations. If cultural resources are found during project implementation the project would be redesigned to protect the cultural resource values present, or evaluation or mitigation procedures would be implemented based on recommendations from the Resource Area Archaeologist, with input from interested federally recognized Tribes, and concurrence from the Field Manager and State Historic Preservation Office.

Glossary

Biomass Utilization - Removes slashed wood or woody fiber by-products that result from forest and woodland restoration, thinning activities, and fuel treatments to be applied towards bio-energy use and/or products manufactured from material such as posts, poles, and firewood.

Cable yarding - Removes logs by use of wire cable(s) and tower for full or partial suspension log removal from harvest units.

Legacy tree -

- Substantially larger and older than the second growth trees, indicating that the tree was one of the seed trees of the current stand. These generally have bottle-brush shaped crowns.
- Large diameter limbs, an indication that the tree was once open grown and had a large crown. Limbs (live or dead) are usually heavy and gnarled, covered with mosses and lichens, and near the ground. Large and/or gnarly epicormic branches present. Whorl indicators may be visible.
- Thick bark with characteristic coloring. Douglas-fir will have deep fissures and a chocolate brown color. Coarse and rugged appearing bark with charcoal or thick and soft with deep fissures. Second growth Douglas-fir display more gray color in the bark. Ponderosa pines exhibit thick, plate-like, and yellow-orange colored bark, whereas second growth pine display more reddish colored bark.
- Overstory trees remaining from an earlier cohort which would have a portion of their crowns above the dominant canopy. Presence of charcoal on the bark and pockmarked appearance.

Lop & Scatter - scattering of tree limbs and small diameter logs to facilitate its decomposition.

Jumping Bean Project Scoping Map

R6W

R5W

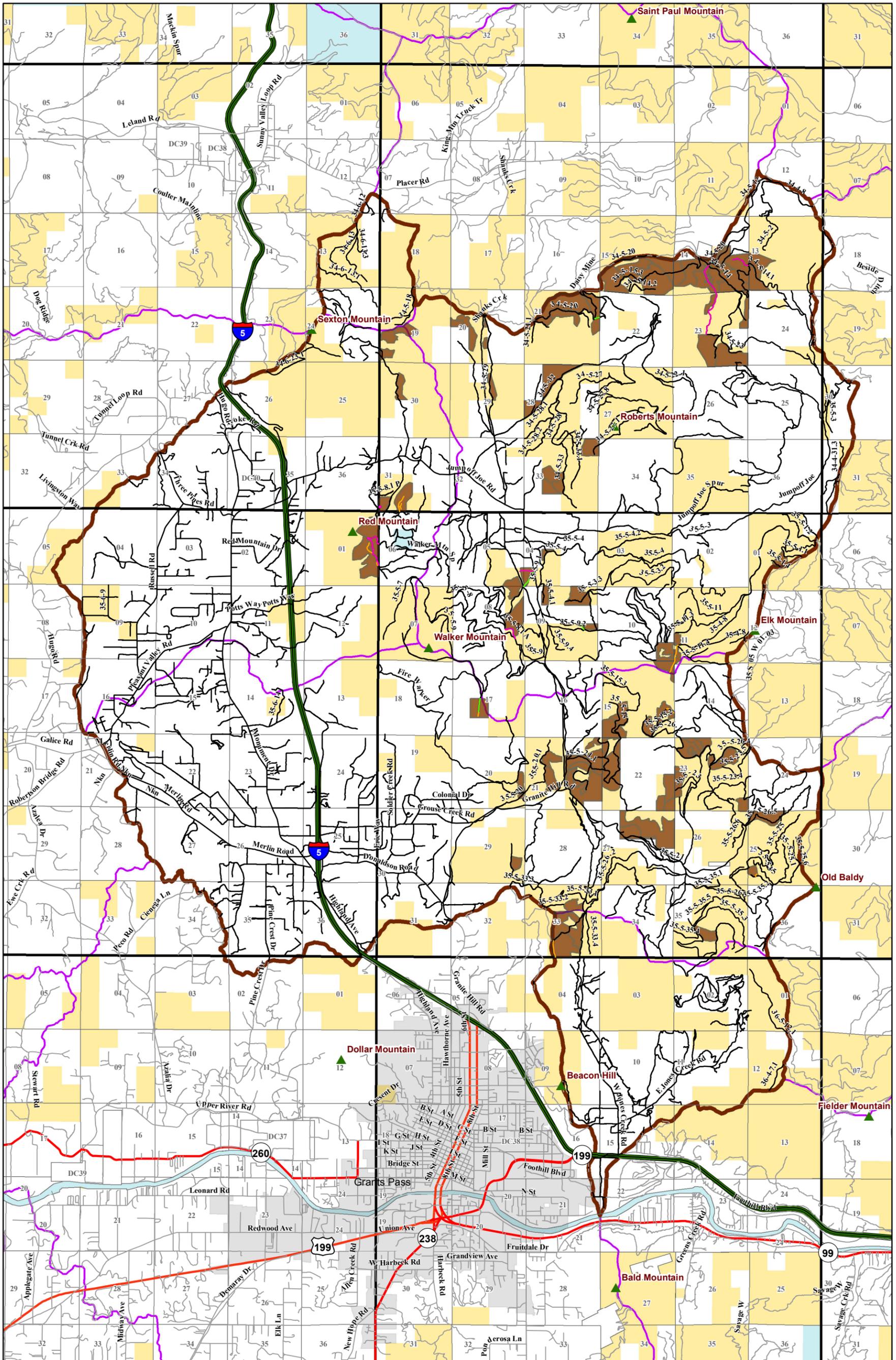
R4W

T33S

T34S

T35S

T36S



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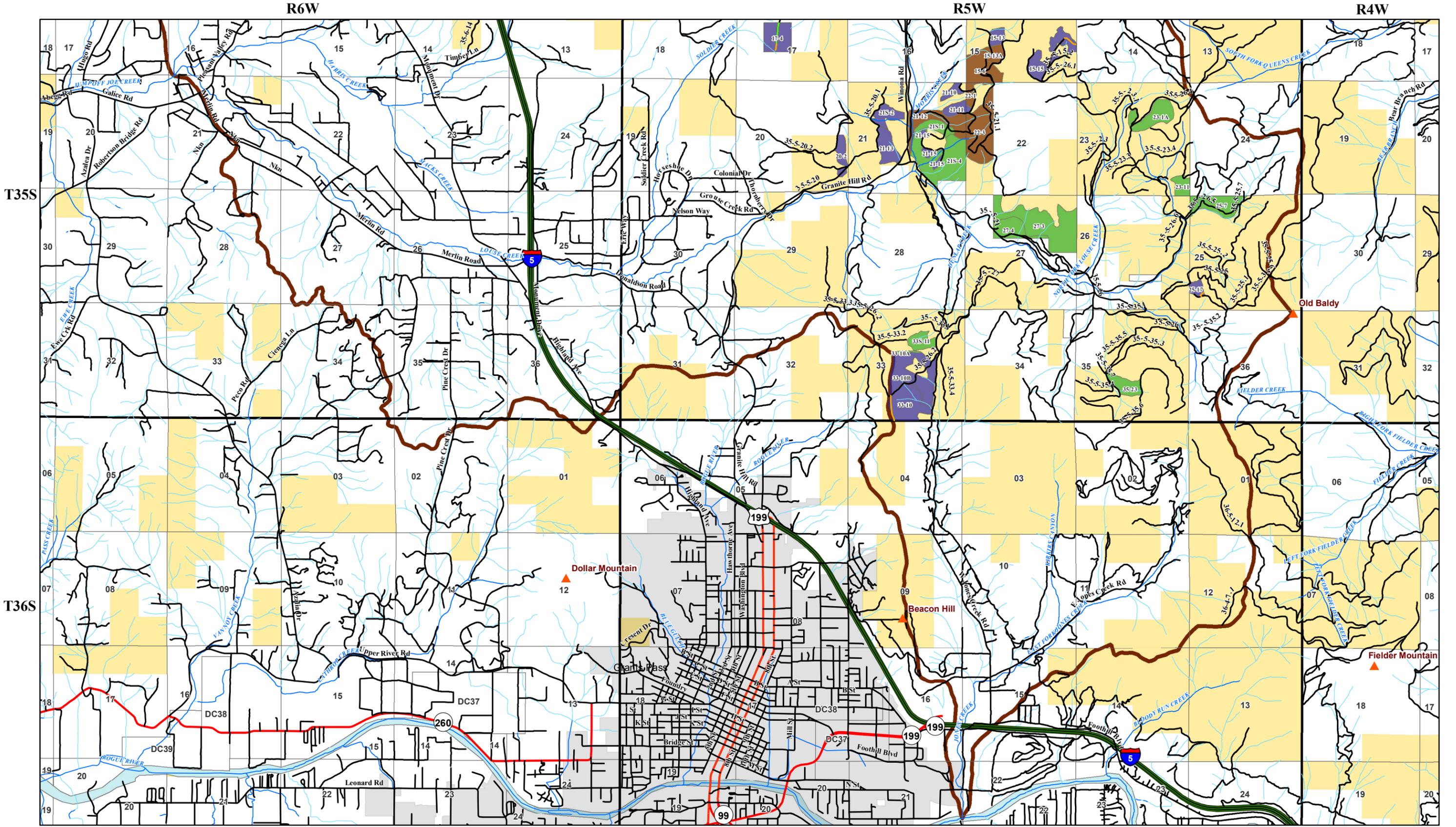
- Road Renovation
- Temporary Route Construction
- Temporary Route Reconstruction
- Roads
- Proposed Units
- Project Boundary
- Bureau of Land Management
- State
- Private/Unknown
- HUC 6 Boundary
- U.S. Forest Service



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Jumping Bean Project Scoping Map - South



T35S

T36S

R6W

R5W

R4W



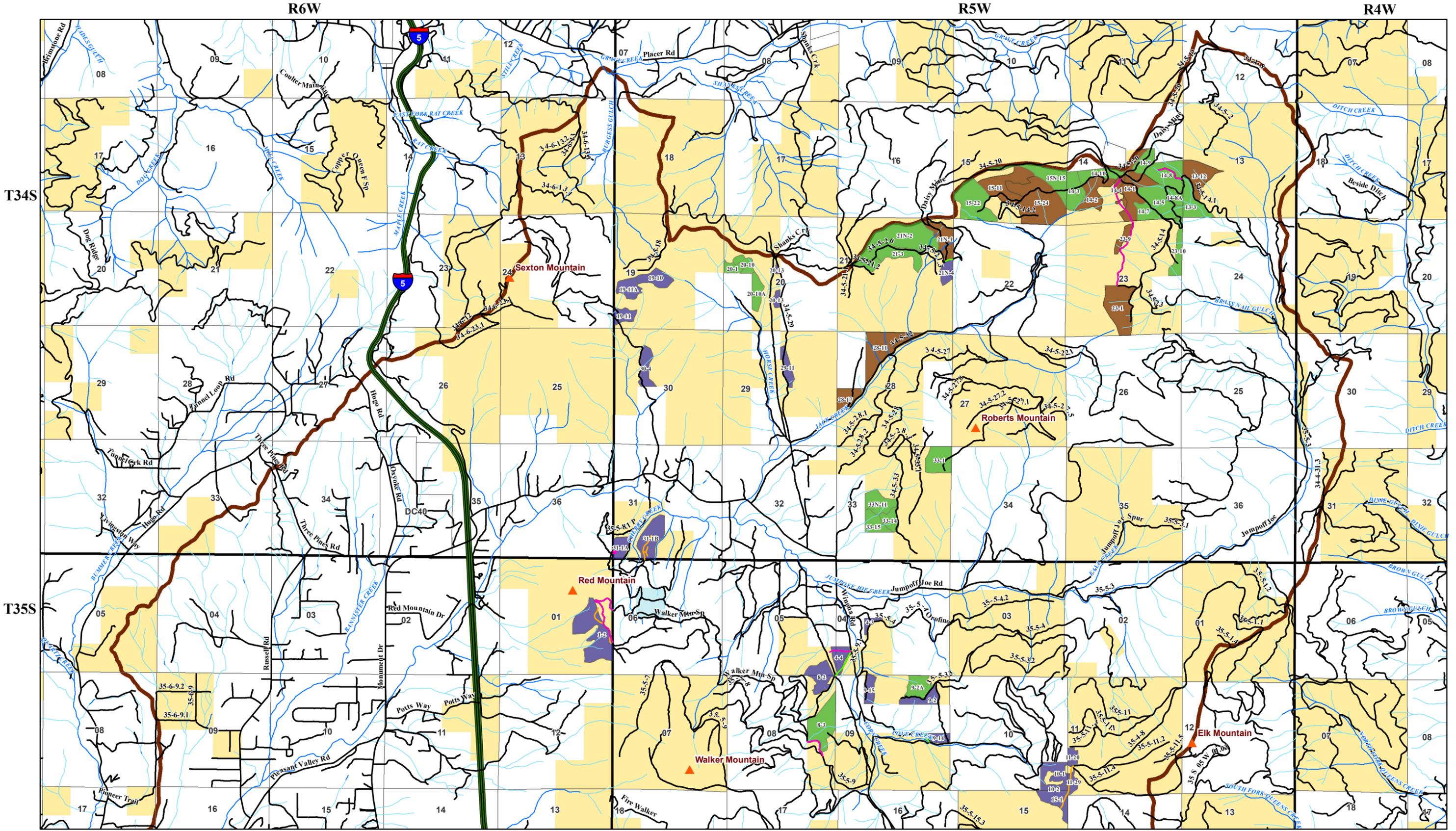
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- Road Renovation
- Perennial Streams
- Density Management / Hazardous Fuels Reduction
- Project Boundary
- Bureau of Land Management
- State
- Temporary Route Construction
- Intermittent Streams
- Hazardous Fuels Reduction
- U.S. Forest Service
- Private/Unknown
- Temporary Route Reconstruction
- Variable Density Thinning
- Roads



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Jumping Bean Project Scoping Map - North



T34S

T35S

R6W

R5W

R4W



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- Road Renovation
- Temporary Route Construction
- Temporary Route Reconstruction
- Roads
- Perennial Streams
- Intermittent Streams
- Density Management / Hazardous Fuels Reduction
- Hazardous Fuels Reduction
- Variable Density Thinning
- Project Boundary
- Bureau of Land Management
- State
- Private/Unknown
- U.S. Forest Service



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