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)

MAR 29 2012

Dear Interested Party:

A Scoping Report for the Williams IVM Project is available for comment and review starting March 30, 2012. The project's purpose and need is to implement forest management activities that would restore ecological systems of forests in southwest Oregon, reduce wildfire danger, and contribute to continuous timber production. This project would retain trees generally older than 150 years of age including legacy trees, oaks, and hardwoods.

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

- 285 acres of Variable Density Thinning
- 153 acres of Commercial Thinning
- 868 acres of Density Management
- 855 acres of Pre-Commercial Thinning
- 4,198 acres of Hazardous Fuel Reduction
- 244 acres of Oak and Pine Restoration

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

- 0.40 miles of temporary route construction
- 1.07 miles of temporary route re-construction
- 2.32 miles of road renovation/improvement

The Williams IVM Project Planning Area (PA) is on BLM land outlying the community of Williams within the Williams Creek and Applegate River fifth-field watersheds.

The Williams IVM Scoping Report may be accessed from (1) the Grants Pass Interagency Office, 2164 NE Spalding Avenue, Grants Pass. Office hours are Monday through Friday, 8:00 A.M. to 4:30 P.M., closed on holidays; **(2)** the Medford District's internet site at *http://www.blm.gov/or/districts/medford/plans/index.php*; or **(3)** 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.

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 these projects by identifying resource concerns and objectives that the IDT has not already identified, and that have not already been analyzed in the Medford Resource Management Plan (RMP). These projects do not provide an opportunity to re-visit

landscape-wide decisions that were made in the RMP. Rather, helpful comments will assist me by identifying those concerns not previously considered that you feel are important, and explanation of why you believe those concerns are relevant to my ultimate decision on how to carry out the selected management options for the locations identified.

I encourage you to provide comments to me in writing on the proposed Williams IVM Project on or before May 4, 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 Williams IVM Project, please state this prominently at the beginning of your comment letter. Those that choose not to respond to this 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.

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,

Karen M. Schank
Field Manager
Grants Pass Resource Area

WILLIAMS IVM PROJECT SCOPING REPORT

Chapter 1 – Purpose and Need for the Action

1.1 Proposed Action

The Williams IVM project is named after the term Integrated Vegetation Management or IVM, which is a systematic landscape approach that incorporates a variety of stand and vegetation management options (e.g., commercial timber harvest, small diameter and other forest product utilization, fuel hazard reduction, or no treatment) developed by multiple disciplines (e.g., timber, fuels, silviculture, wildlife) to accomplish multiple integrated resource objectives.

The Williams IVM Project Proposed Action includes forest management activities on approximately 6,604 acres of forest land. Of these acres the following is proposed: 285 acres of Variable Density Thinning, 153 acres of Commercial Thinning, 868 acres of Density Management, 244 acres of Oak and Pine-Oak Restoration, 855 acres of Pre-Commercial Thinning, and 4,198 acres of Hazardous Fuel Reduction (see Chapter 2 below for definitions of these treatments). Cut trees would be removed by the use of tractor or skyline cable. Trees to be removed for harvest would be whole-tree yarded or yarded with attached tops to minimize impacts. Slash would be treated using one or more of the following actions: lop & scatter, pile & burn, chipping, underburning, or biomass utilization.

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 for 2013 through 2023. BLM planning decisions and harvest activities would apply only to BLM-administered O&C and Public Domain lands.

1.2 Project Location

The Planning Area (PA) is on BLM lands outlying the community of Williams, Oregon. Table 1-1 lists the watersheds and sub-watersheds in the Williams IVM Project Planning Area.

Table 1-1. Williams IVM Project Planning Area Watersheds

Sub-watersheds (HUC 6s)	Watershed (HUC 5s)
West Fork Williams Creek	Williams Creek
East Fork Williams Creek	
Powell Creek	
Slagle Creek	Applegate River
Caris Creek	

The legal description of the PA is T37S-R5W-Sections 34, 35; T38S-R4W-Sections 7, 18, 19, 30; T38S-R5W-Sections 1-5, 7-36; T38S-R6W-Sections 12, 13, 23, 24, 25-27, 34-36; T39S-R5W-Sections 1-35; T39S-R6W-Sections 1-3, 10-12, 13-15, 23-26, 36; and T40S-R5W-Sections 2-5 in Josephine County, Willamette Meridian.

1.3 Purpose and Need for the Proposal

The Williams IVM Project is designed to meet BLM's obligation to implement the Medford District BLM's Resource Management Plan and to address the primary needs identified for lands in the Planning Area. The project's purpose and need is to implement forest management activities that would restore ecological systems of forests in southwest Oregon, reduce wildfire danger, and contribute to continuous timber production. This project would retain trees generally older than 150 years including legacy trees, oaks, and hardwoods.

The RMP directs the BLM to implement the Oregon and California Railroad Revested Lands (O&C Act) which requires the Secretary of the Interior to manage O&C lands for permanent forest production.

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 the 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.
- Produce a sustainable supply of timber and other forest commodities to provide jobs and contribute to community stability.

- Reduce both natural and activity based fuel hazards through various methods.

1.4 Public Involvement and Decisions to be Made

1.4.1 Collaboration

The form of collaboration the BLM will carry out for the Williams IVM Project will include engaging those interested through public scoping on the project and holding a public meeting and follow-up field trip. Information will be shared and collected from those participating. Through this process, the BLM hopes to hear the desired outcomes from participating parties and identify resource concerns. The information collected at these meetings will be shared with the BLM interdisciplinary team and considered within the scope of the purpose and need for this project.

1.4.2 Public Scoping

Public scoping through the Williams IVM Scoping Report will be the BLM's first step in this collaborative process. The next step will be for the BLM to schedule a public meeting and field trip for those interested the week of April 9th or April 16th, 2012. At the public meeting and field trip, the project will be discussed further, and those interested can ask questions and have concerns about the project be addressed. Additionally, participants can provide information to the Grants Pass Resource Area Field Manager and members of the BLM interdisciplinary team.

If you are interested in attending the public meeting and/or field trip, please contact Michelle Calvert, Planning and Environmental Coordinator, at 541-471-6505 or via email BLM_OR_MD_Mail@blm.gov, please state attn.: Michelle Calvert for Williams IVM in the subject line of the email.

1.4.3 Environmental Analysis Document

After the BLM has considered the comments received during this first phase of public input and the Williams IVM Project has been evaluated for refinement or changes to the Proposed Action, the intersiciplinary team will begin work on the environmental analysis document to determine anticipated effects on resources.

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

Should it be determined an EIS is not needed, the BLM will document its anticipated effects in an Environmental Assessment (EA). Once the EA is completed it will be made available for a 30-day public review period.

Notification of the EA comment period will include: the publication of a legal notice in the Daily Courier, newspaper of Grants Pass, Oregon; and a letter will be mailed to those individuals, organizations, and agencies that have requested to be involved in the environmental planning and decision making processes for activities addressed in this EA. It is anticipated the environmental analysis document will be ready for review July 2012.

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 would contribute towards the restoration of ecological systems of forests in southwest Oregon;
- silvicultural systems that are 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; and
- reducing natural and activity based fuel hazards

Chapter 2.0 Alternative Ways of Accomplishing the Objectives

2.1 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 (±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 ¼ to 2 acre 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. Post treatment, the average crown closure across the unit would range from 30 to 40 percent crown closure.

Douglas-fir Series
Generally, average stand basal area would range between 80 and 120 ft^2/acre (some sites may require slightly lower or higher retention based on productivity e.g., 60 or 140 ft^2/acre). Trees greater than 150 years of age would not be prescribed for removal. Large oaks, ponderosa and sugar pines, and incense cedars would be favored for retention. Competing vegetation and fuels may be removed within twice the drip line length around most retention trees.

Portions (± 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 ¼ to 2 acre would be created (± 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 ¼ 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, a basal area of 80 ft^2/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.

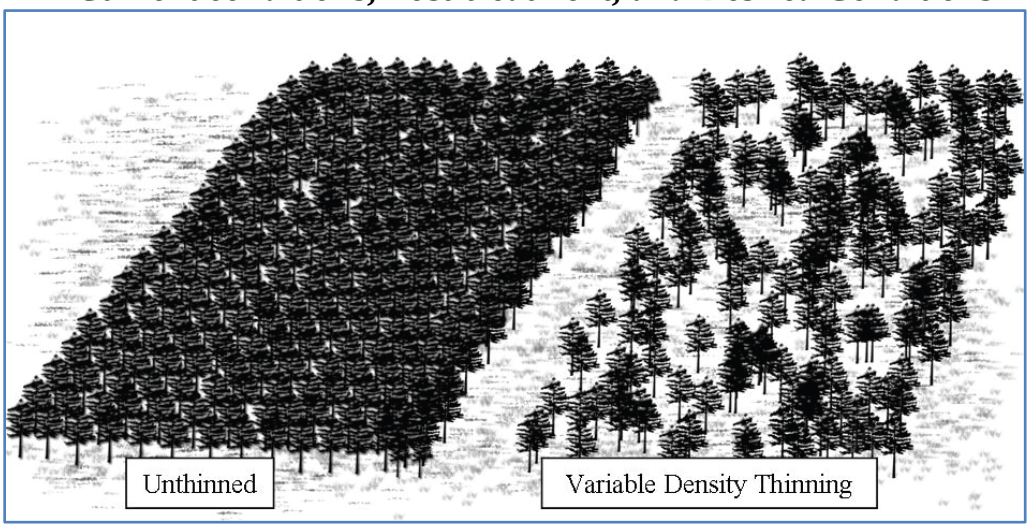
On dry ridges and lower productive sites, especially where manzanita and/or ponderosa pine are found, no more than 80 ft^2/acre of basal area may be retained, favoring ponderosa pine, incense cedar, sugar pine, and Douglas-fir, respectively.

Pine Series

The treatments in the Pine Series would implement forest restoration principles and, due to lower site productivity, these sites would not be able to carry or support the same densities as Douglas-fir sites.

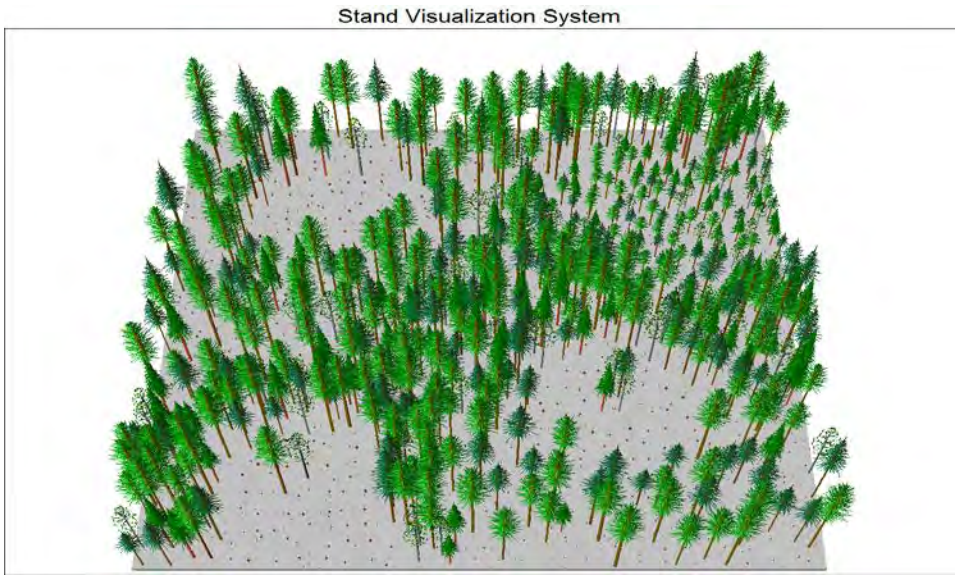
As a result, lower overall stand basal area would be retained, at 60-80 ft^2/acre at the stand level. A basal area of 80-120 ft^2/acre may be incorporated where site productivity shifts to favor growth of Douglas-fir (e.g. aspect changes where Douglas-fir outperforms ponderosa pine). Trees greater than 150 years old would be retained. Hazardous fuels and competing vegetation would be removed within twice the dripline of identified retained trees.

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).



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 ¼ to 1 acre gap openings so that ±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*

Commercial Thin (CT) – Treatment goals are to contribute toward continuous timber production while utilizing ecological forestry principles of dry forests to restore more characteristic and sustainable ecological conditions and functions. Proposed Commercial Thinning for the Williams IVM Project would retain the key habitat features for northern spotted owl habitat so that its function would be maintained. Commercial thinning would remove trees that function as ladder fuels, reduce risks to older trees from wildfire and competition, favor more fire and drought tolerant tree species, control stand density, increase stand vigor and place or maintain stands on developmental paths so that desired stand characteristics of dry forests result in the future and primary elements for northern spotted owl habitat are maintained. Over time, crowns of remaining trees would become fuller. Dry forest restoration principles as well as growth and yield considerations would be applied to Commercial Thinning treatments. Thinning to improve growth of residual trees, restoring spatial heterogeneity in a non-uniform distribution of forest structural elements of dry forests would be incorporated such that homogenous conditions are avoided and key habitat features that support spotted owl habitat are maintained. Treatment would not change the conditions that would classify the stand as nesting, roosting, and foraging (NRF) or dispersal post-treatment. The NRF stand would retain at least 60 percent canopy cover, large trees, multistoried canopy, standing and down dead wood, diverse understory adequate to support prey, and may have some mistletoe or other decay. The habitat classification of the stand following treatment would be the same as the pretreatment habitat classification.

Visual Representations – Current conditions, Post-treatment, and Desired Conditions


The photographs above represent areas proposed for commercial thinning. These photographs depict the range of stand conditions present - portions with young dense understory and portions with mixed stands (component of young trees with a few larger dominants).

Some overstory and understory tree growth are creating within stand 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).


The left photograph above, depicts a representative existing canopy closure for stands containing spotted owl nesting, roosting, and foraging habitat, in this Project Area. The right photograph above depicts a representative post treatment canopy closure. In 10-20 years, crowns of existing trees would become fuller and overall stand vigor and growth would be improved.

Density Management (DM) – Treatment goals are to reduce stocking levels throughout the stand and promote growth and structural development of residual trees. Pre-commerical 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, handpile & burn, chipping, and/or biomass utilization. Maintenance underburning is generally performed within 10 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. This treatment would reduce the risk of 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. 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.

Pre-Commercial Thin (PCT) – The objective of PCT treatments would be similar to Hazardous Fuel Reduction, but are designed for silvicultural purposes of improving conifer tree growth, form, vigor, and production. They may occur on plantations or natural stands. Density reduction provides growing space for conifers and decreases long term fire hazard. Riparian PCT would be permitted up to 50 ft of the stream bankful width.

The understory in the Williams IVM Project is defined as conifer, hardwood tree and shrub species less than 8 inches dbh. Stands in need of PCT are overstocked. Understory trees are experiencing early competition shrubs, hardwoods, and neighboring conifers. Understory reduction would consist of thinning trees up to 8 inch dbh. Conifers would be spaced 12-16 ft apart and hardwoods would be spaced 25-45 ft apart (plus or minus 10%).

Generally all hardwoods would vary in space based on the plant community and site conditions. Within this range, the wider spacing would be used for species such as sugar pine, Ponderosa pine, white oak or black oak, which thrive in open, sunny conditions. The spacing of conifers will be independently spaced from hardwoods.

Oak Restoration and Pine-Oak Restoration – Treatment goals are to bring identified oak and pine-oak communities to a species composition and structure appropriate to these communities. They involve lower levels of commercial harvesting. Commercial activities include mortality salvage and the recovery of anticipated mortality of conifers, namely Douglas-fir (occasional pine and incense cedar may also require removal for restoration purposes). More than a century of fire suppression has enabled Douglas-fir to encroach upon oak and pine-oak woodlands. The shade tolerance of Douglas-fir has given the species competitive advantage over its shade intolerant associates. The decline in oak and pine is apparent across the landscape. Oak savannahs and pine-oak savannahs are unique ecologies that do not require a prescribed skip or skip design, but rather, requires the removal of Douglas-fir trees in all sizes. The primary treatment is the removal of Douglas-fir that has encroached into these lower productive oak and pine-oak over the course of the last century.

Treatments may include Hazardous Fuels Reduction and Tree Planting described below under Noncommercial Treatments. Hazardous Fuels Reduction in oak and pine-oak plant communities would promote those species commonly encountered in these systems (white oak, and ponderosa pine, black oak species (i.e. drought tolerant / lower site productivity tree and shrub species encountered in oak and pine-oak communities), and manzanita. Site characteristics require lower levels of canopy cover.

- **Oak Restoration**: White oak sites where Douglas-fir encroachment has significantly reduced the integrity of the stand. Thin around the best formed, vigorous oaks to restore site to historic reference condition by removing Douglas-fir up to 150 years of age.
- **Pine-Oak Restoration**: Suitable commercial forestland allocated to timber production, but dominated by grass, shrubs, and hardwoods that resulted from human activity and/or fire exclusion. Conifer clumps thinned from 40-100 basal area per acre.
- Post treatment, the average crown closure across the unit would be 25-50 percent crown closure leaving pine, oaks, shrubs, and Douglas-fir >150 years old.

Port-Orford-Cedar Sanitation – Port-Orford-Cedar (POC) sanitation treatments are incorporated into forest and vegetation management on sites at high-risk for further spread of Port-Orford-Cedar (POC) root disease. POC sanitation treatments are

implemented to help reduce the risk of spreading the disease, benefiting the overall forest health of infested watersheds.

The POC Sanitation treatment would be applied up to 50 ft horizontal distance from each side of the road. This distance would vary based on terrain and likelihood of disease spread. For example, particularly high cut-banks might be treated for 10 ft horizontal distance from roads. This treatment would cut all POC trees within this distance. The amount of POC along the roads is highly variable and is usually more concentrated in or near drainages. The majority of the POC trees along the road are composed of seedlings/saplings to pole size trees with some trees greater than 8 inches diameter at breast height (dbh). No POC greater than 150 years old would be cut. Canopy reduction would be minimal and unlikely to reduce canopy covers below 40%.

Tree Planting – Utilized for restoring early seral, drought and fire tolerant species. This treatment involves tree planting of conifer species (ponderosa pine, sugar pine, incense cedar, and Douglas-fir) to supplement stocking. Following initial treatment, units would be assessed (particularly those that have incorporated gaps) for planting needs based on the available planting space. Tree planting would be conducted at low levels from 150-303 trees per acre to assure basic levels of restocking. Species selected to regenerate sites will be based on site condition, but priority and preference will be given to fire resilient early successional species (i.e. ponderosa pine, incense cedar, and sugar pine).

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 to reduce the presence of surface fuels. Treatments include slashing, hand-piling, pile-burning, chipping, lop and scattering, biomass removal, and/or underburning. Slashed material would be up to 8 inches diameter at breast height (dbh) and conifer spacing would be approximately 18 x 18 ft, and hardwood spacing would be up to 40 x 40 ft or narrower depending on hardwood size class (plus or minus 10%). Riparian fuels reduction would be permitted up to 50 ft of the stream bankful width. Maintenance underburning is generally performed within 10 years following initial treatments and would be driven by the condition of the stand and re-growth of slashed vegetation.

Activity fuel treatments – Activity fuel is slash created from timber and vegetative treatments. To reduce the fuel loading, slash would be treated using one or more of the following actions: machine or handpile/burned, chipped, lopped and scattered and/or underburned based on a post-treatment assessment of fuel loading. Trees to be removed for harvest would be whole-tree yarded or yarded with tops attached. Slash generated from whole-tree yarding would be brought to the landing where it would be piled and burned, chipped, or removed for biomass utilization.

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. 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.

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 Proposed Action

The Williams IVM Project is 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 purpose and need is to implement forest management activities that would restore ecological systems of forests in southwest Oregon, reduce wildfire danger, and contribute to continuous timber production. The RMP directs the BLM to implement the Oregon and California Railroad Revested Lands (O&C Act) which requires the Secretary of the Interior to manage O&C lands for permanent forest production. See the enclosed Williams IVM Project Scoping Report Maps: Proposed Action.

2.4.1 Forest Management

The Proposed Action would treat 285 acres by Variable Density Thinning in 9 units, 153 acres of Commercial Thin in 10 units, 868 acres by Density Management in 29 units, 855 acres of Pre-Commercial Thin in 29 units, 4,198 acres by Hazardous Fuel Reduction in 113 units, and 244 acres by Oak and Pine Restoration in 9 units. See Table 2-1 for further details.

2.4.2 Timber Yarding

Harvest yarding systems for the Proposed Action are 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. Williams IMV Project Forest Management Units

Township-Range-Section	Unit Number	Proposed Treatment	Acres
T37S-R5W-34	34-1N	HFR	44
	34-2N	HFR	7
	34-3N	HFR	2
	34-4	HFR	13
	34-5	HFR	12
T38S-R4W-19	19-8	HFR	85
	19-9	HFR	29
	19-18b	PCT	85
	19-19	HFR	9
	19-20	HFR	27
T38S-R5W-3	3-1a	HFR	42
	3-1b	HFR	23
	3-3	HFR	63
	3-4	HFR	35
	3-6	DM	155
	3-7a	DM	41
	3-7b	DM	36
	3-8	HFR	36
	3-9	DM	27
T38S-R5W-15	15-3N	HFR	54
T38S-R5W-24	24-2A	HFR	33
	24-2B	HFR	17
	24-3	HFR	35
	24-5	HFR	6
	24-7	HFR	48
	24-8	HFR	90
	24-9	HFR	20
	24-10	HFR	2
T38S-R5W-25	25-1b	HFR	128
	25-2	HFR	179
	25-5N	HFR	44
	25-6a	HFR	6
	25-6b	HFR	7
T39S-R5W-1	1-2	HFR	8
	1-4E	HFR	34
	1-6	HFR	31
	1-6A	HFR	45

Township-Range-Section	Unit Number	Proposed Treatment	Acres
T39S-R5W-1	1-7	HFR	90
	1-8	DM	8
	1-10	DM	12
	1-11	Pine-Oak Restoration	156
T39S-R5W-7	7-1	HFR	12
	7-2	HFR	34
	7-4	HFR	3
	7-7	PCT	31
	7-8	HFR	43
	7-9	HFR	4
	7-14	HFR	23
T39S-R5W-9	9-1	PCT	25
	9-2	DM	10
	9-5	CT	7
	9-5A	DM	50
	9-6	DM	29
	9-6A	PCT	5
	9-6b	DM	13
	9-6C	PCT	17
	9-7	DM	45
	9-8a	DM	37
	9-8b	DM	11
	9-8c	DM	13
	9-8d	DM	3
	9-8e	DM	13
	9-9	HFR	30
	9-10	HFR	51
	9-11	CT	6
	9-11A	HFR	32
T39S-R5W-11	11-1	PCT	4
	11-2a	HFR	26
	11-2c	HFR	9
	11-2d	HFR	12
	11-3	Oak Restoration	14
	11-4	Oak Restoration	5
	11-5	HFR	15
	11-6	HFR	9
	11-7	HFR	2

Township-Range-Section	Unit Number	Proposed Treatment	Acres
T39S-R5W-12	12-1	HFR	16
	12-2a	CT	30
T39S-R5W-12	12-2b	VDT	26
	12-3	CT	36
	12-3E	CT	36
	12-5	HFR	2
	12-7	Pine-Oak Restoration	3
	12-8	Pine-Oak Restoration	15
	12-9	VDT	7
	12-9A	Pine-Oak Restoration	5
	12-10a	HFR	2
	12-10b	HFR	4
	12-13a	CT	5
	12-13b	VDT	12
T39S-R5W-13	13-4	CT	5
	13-4A	HFR	7
	13-5	CT	12
	13-9	HFR	18
	13-12	CT	9
	13-13b	PCT	23
	13-15	HFR	10
	13-16	DM	6
	13-18	HFR	1
T39S-R5W-14	14-1	Oak Restoration	20
	14-2a	HFR	15
	14-2c	HFR	11
	14-4	Oak Restoration	20
	14-5	HFR	18
	14-7	DM	56
	14-8a	HFR	14
	14-8b	HFR	20
	14-9	DM	14
	14-10	HFR	23
	14-12a	HFR	11
	14-12b	HFR	22

Township-Range-Section	Unit Number	Proposed Treatment	Acres
T39S-R5W-15	15-1	DM	30
	15-2	CT	8
	15-2A	HFR	14
	15-2A.1	HFR	158
	15-2A.2	HFR	81
	15-2B	Oak Restoration	8
T39S-R5W-15	15-2BB	HFR	2
	15-4	HFR	53
	15-5	DM	41
	15-6	HFR	37
T39S-R5W-17	17-1	HFR	33
	17-2	HFR	33
	17-3	HFR	33
	17-4	PCT	47
	17-4A	HFR	41
	17-5	HFR	41
	17-6	HFR	49
	17-8	HFR	13
	17-12	HFR	64
	17-13	HFR	29
	17-14	PCT	28
	17-15	PCT	12
	17-16	HFR	42
	17-17	HFR	4
	17-18	HFR	29
	17-19	HFR	11
T39S-R5W-21	21-5	PCT	93
	21-6	PCT	20
	21-9	PCT	14
	21-10	PCT	24
	21-11	HFR	3
	21-12	DM	18
	21-13	HFR	14
	21-14	HFR	12
	21-15	PCT	35
	21-16	PCT	8
	21-17	PCT	34
	21-18a	HFR	20

Township-Range-Section	Unit Number	Proposed Treatment	Acres
T39S-R5W-21	21-18b	HFR	16
	21-19	PCT	2
	21-20	PCT	8
T39S-R5W-22	22-1	PCT	35
	22-2	PCT	29
	22-3	PCT	34
	22-5	HFR	3
	22-6	PCT	57
T39S-R5W-23	23-1	HFR	70
	23-5a	HFR	49
	23-5b	HFR	22
	23-6	HFR	4
	23-7E	DM	23
	23-8	DM	58
	23-9	DM	27
	23-10	PCT	20
	23-11	PCT	16
	23-12	DM	18
	23-13	DM	27
	23-15	HFR	16
	23-16	PCT	8
	23-17	HFR	11
T39S-R5W-25	25-4	HFR	29
T39S-R5W-27	27-1	PCT	32
	27-2	PCT	104
	27-3	HFR	144
	27-4	HFR	208
	27-6	HFR	9
	27-7	HFR	53
T39S-R5W-28	28-1	HFR	14
	28-2	HFR	48
T39S-R5W-29	29-1	HFR	34
	29-2	HFR	44
	29-5	HFR	67
	29-7	HFR	28
	29-8A	HFR	27
	29-11	DM	20
T39S-R5W-34	34-1S	HFR	266
	34-2S	HFR	336
	34-3S	HFR	7

Township-Range-Section	Unit Number	Proposed Treatment	Acres
T39S-R6W-3	3-17	VDT	72
T39S-R6W-23	23-4	VDT	41
	23-7W	VDT	8
T39S-R6W-25	25-5W	VDT	15
	25-13	VDT	39
T39S-R6W-26	26-1	VDT	66

Legend

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

2.4.3 Road Work

Proposed road work associated with timber harvesting for the Proposed Action includes 0.33 miles of temporary route construction, 1.07 miles of temporary route re-construction, and 1.96 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 17-4	0.36
	into Unit 25-13	0.15
	into Unit 25-5W	0.86
	into Unit 26-1	0.59
temporary route construction (Decommission after use: Block, rip, waterbar, and mulch after use)	into Unit 26-1	0.27
	into Unit 9-5	0.06
temporary route re-construction (Decommission after use: Block, rip, waterbar, and mulch after use)	into Unit 25-13	0.21
	into Unit 25-5W	0.09
	into Unit 26-1	0.77

2.4.4 Activity Fuels Treatments

Activity fuel is slash created from timber and vegetative treatments. To reduce the fuel loading, activity slash within units may be machine or handpile/burned, chipped, or lopped and scattered based on a post treatment assessment of fuel loading. 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 4,198 additional acres in 113 units where existing vegetation and fuel loading pose a wildfire hazard. 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. 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	
Acres of VDT (Douglas-fir series)	285
Acres of CT	153
Acres of DM	868
Acres of PCT	855
Acres of HFR	4,198
Acres of Oak and Pine Restoration	244
Total treatment acres	**6,604**
Roads (Miles)	
• temporary route construction	0.33
• temporary route re-construction	1.07
• road renovation/improvement	1.96

2.5 Project Design Features, Best Management Practices, and Standard Operating Practices

Project Design Features (PDFs) and Best Management Practices (BMPs) for the Williams IVM Project are under development. Our standard set of PDFs and BMPs are included below. The refined PDFs and BMPs will be available for public review in the environmental analysis document. BMPs and PDFs ensure project compliance with the federal Clean Water Act and higher-level National Environmental Policy Act (NEPA) documents, laws and BLM guidelines. BMPs are specifically required by the Federal

Clean Water Act to reduce nonpoint source pollution. The BMPs are methods, measures, or practices to ensure that water quality would be maintained. Project Design Features (PDFs) are specific measures that will be included in the site specific design of the Williams IVM Project to eliminate or minimize adverse impacts on the human environment and are development with the aid of field information and interdisciplinary team discussion and resource protection measures specific to the Planning Area.

2.5.4.1 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.

2.5.4.2 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.

2.5.4.3 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.

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.

Seed and mulch cut and fill slopes, ditchlines, and excavation waste disposal upon construction completion for new landings and temporary route spurs. Where straw mulch is used, require certified weed free. Mulch shall be applied at no less than 200 lbs/acre.

Ditchline blading would occur to restore proper drainage and road surface blading would occur to maintain the running surface or restore proper drainage. Blading of ditch lines would not occur within 50 ft of streams unless the lack of blading would compromise the integrity of the road prism. If blading within 200 ft of streams is required, sediment control measures in the ditch are required.

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.

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.

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 trials 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.

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.

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.

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.

Temporary route construction and reconstruction (including associated decommissioning) 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.

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.

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 connected[1] to streams.

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. Sediment barriers would be placed by the purchaser according to specifications and locations outlined by the BLM fish biologist, engineer, and contract

[1] 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 East West Junction 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).

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.

2.5.4.4 Streams and Riparian Zones

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.

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.

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.

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.

Upon completion of harvest, all existing skid trails utilized during this harvest activity within Riparian Reserves would be rehabilitated (as per described above for upland skid trails).

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, but no ignition would take place in the EPZ or no-treatment areas.

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.

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.

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.

2.5.4.5 Special Status and Survey and Manage Plant Species

Bureau Sensitive and Survey and Manage botanical species would be protected by the 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 (See Table 2-4 for specific units).

2.5.4.6 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.

2.5.4.7 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. Harassment Distances from Various Activities for 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

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.

2.3.4.8 Cultural sites

Cultural resource surveys in Planning Area were conducted and site specific protection measures 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 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.

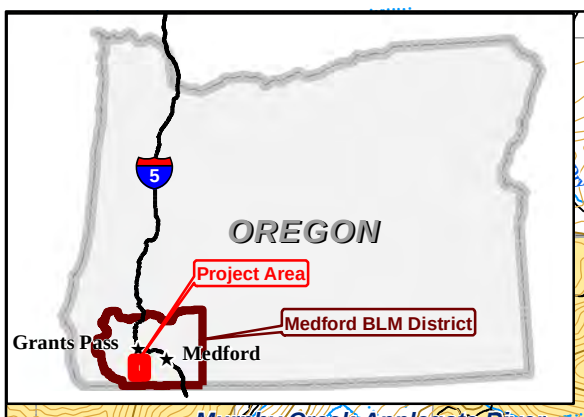
- Large diameter limbs, an indication that the tree was once open grown and had a large crown. Limbs (live or dead) are usually heavy and gnarled, covered with mosses and lichens, and near the ground. Large and/or gnarly epicormic branches present. Whorl indicators may be visible.

- 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.

Williams IVM Project Scoping Vicinity Map



Caris Creek-Applegate River
Murphy Creek-Applegate River
Slagle Creek-Applegate River
Powell Creek-Williams Creek
Upper Deer Creek
West Fork Williams Creek
East Fork Williams Creek
Thompson Creek
Grayback Creek
Sturgis Fork Carberry Creek
Pennington Mountain
Pennington Butte
Mungers Butte
Holcomb Peak
Little Sugarloaf Peak
Buck Peak
Little Humpy Peak
Williams
T37S-R05W
T37S-R04W
T38S-R06W
T38S-R05W
T38S-R04W
T39S-R06W
T39S-R05W
T39S-R04W
T40S-R06W
T40S-R05W
N Applegate Rd
Powell Creek Rd
Kincaid Rd
Browns Rd
Cedar Flat Rd
Panther Gulch Rd
Messinger Rd
Kubli Rd
Water Gap Creek
Camp Meeting Creek
Water Gap Rd
Miller Creek
Rocky Creek
Caris Creek
Hog Eye Creek
Slagle Creek
Johnston Creek
Black Canyon Creek
Gray's Creek
Cherry Flat Sp
Cherry Flat Main
Cherry Fl
Gray's Ck Sp
Gray's Ck Sp A
Honey Suckle P Line
Water Gap Sp
Pennington Creek
Spencer Crk B
Wallow Creek
Murphy Mtn
Powell Crk
China Basin
China Basin Rd
China Crk
Marble Gulch
North Fork Munger Creek
Mungers Mule B Spr
Mungers Crk
Munger Creek
China Creek
Swamp Creek
Cedar Flat Sp
Cedar Flat
Elk Sp B
Cedar Flat Sp
Bear Wallow Creek
Cedar Bill
Bill Creek
Caves Camp Rd
Goodwin Creek
Clapboard Gulch
Clapboard B Sp
E Fork Rd
West Fork Williams Creek
Blue Jay Creek
Banning Creek
Butcher Creek
Horsehead Creek
Dry Creek
Williams Hwy
Ferris Gulch
Star Mine
Thompson Rdg
Thompson Creek Rd
Panther Gulch
Rock Crk Rd
Rock Crk
Horsetail Creek
Lone Crk
Low Div E
S I M P Line
Right Hand Fork Rock Creek
East Fork Williams Creek
First Fork Williams Creek
Ripe Fork
Bear Wallow Creek
Windy Creek
Fourmile Creek
Jerrny Creek
Grayback Crk
Little Sugarloaf
Low Divide
Bill Crk
Bear Wallow Crk
FS 059
FS 461.1
4611
4613
238

Legend

Roads
Road Renovation
Temporary Route Reconstruction
Temporary Route Construction

Stream
Perennial
Intermittent
6th Field Subwatersheds
Project Area

Ownership
Bureau of Land Management
U.S. Forest Service
Private

Treatment
Commercial Thinning
Density Management
Hazardous Fuels Reduction
Precommercial Thinning
Variable Density Thinning
Oak Or Pine-Oak Restoration/Hazardous Fuels Reduction

Miles
0 2 4

No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data. Original data were compiled from various sources and may be updated without notification.

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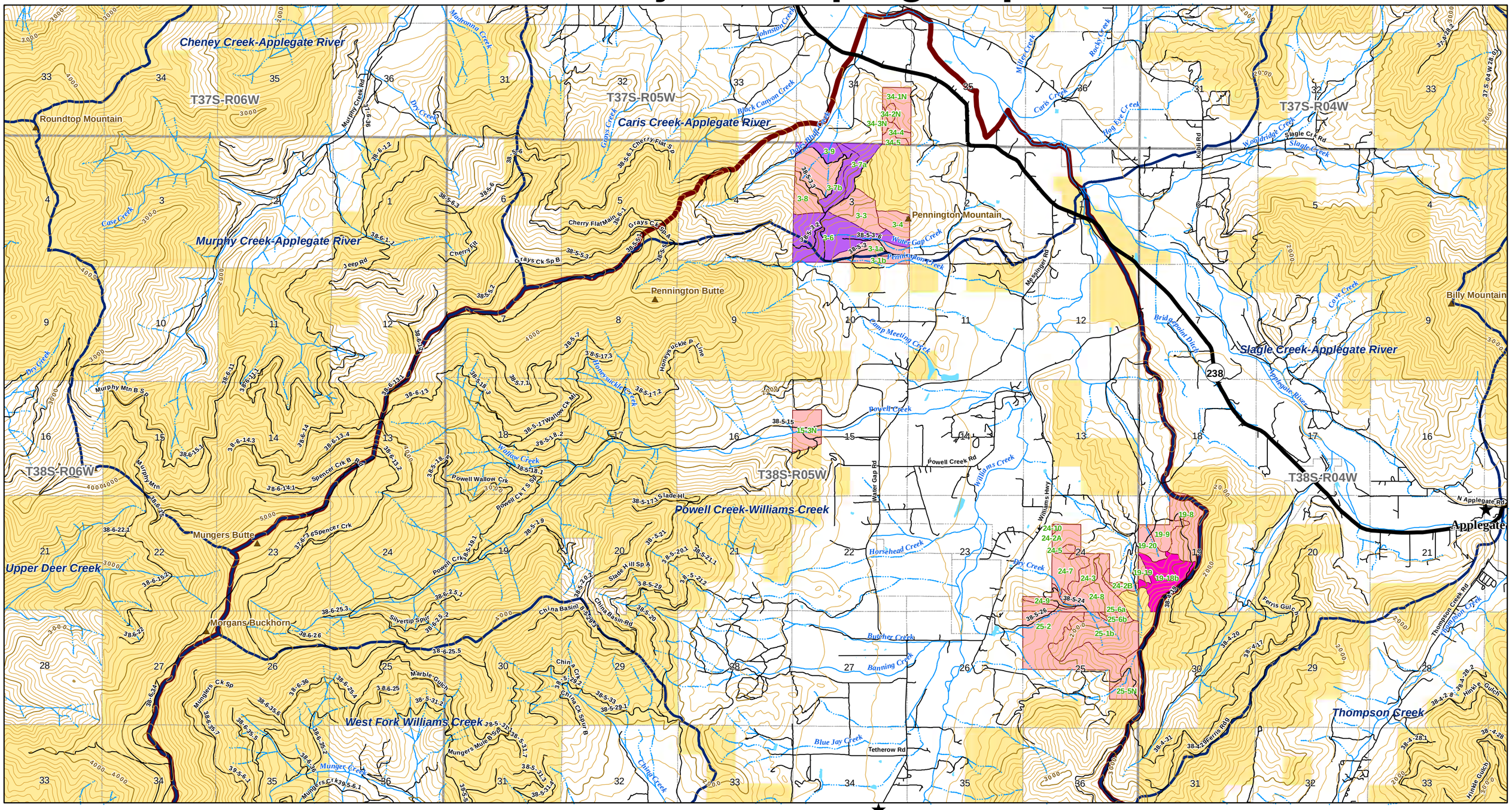
Williams IVM Project Scoping Map - North



Legend

Roads
Road Renovation
Temporary Route Reconstruction
Temporary Route Construction

Stream
Perennial
Intermittent
6th Field Subwatersheds
Project Area

Ownership
Bureau of Land Management
U.S. Forest Service
Private

Treatment
Commercial Thinning
Density Management
Hazardous Fuels Reduction
Precommercial Thinning
Variable Density Thinning
Oak Or Pine-Oak Restoration/Hazardous Fuels Reduction

Miles
0 1.5 3

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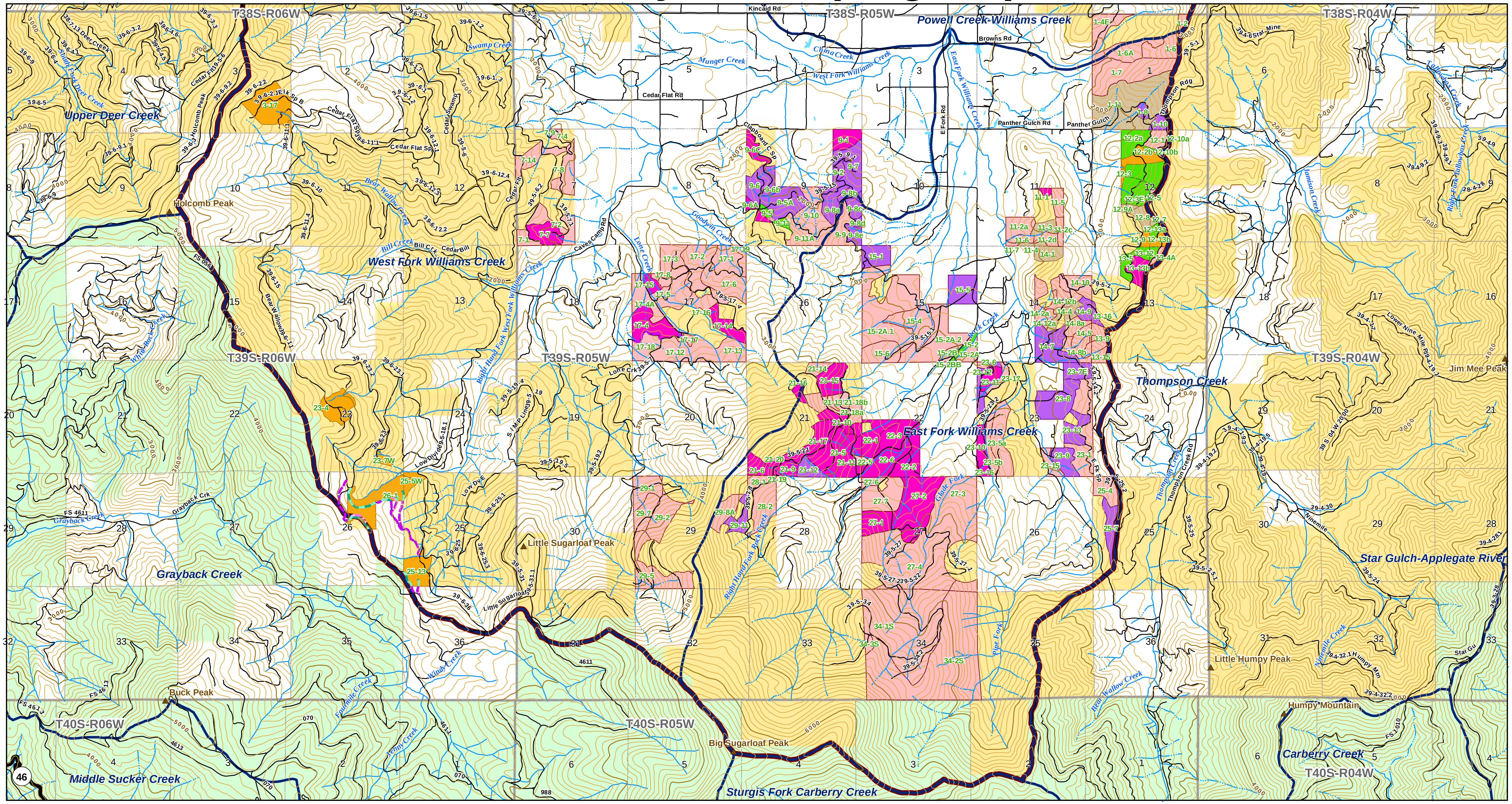
Williams IVM Project Scoping Map - South



Legend

- Roads
- Road Renovation
- Temporary Route Reconstruction
- Temporary Route Construction

Stream

- Perennial
- Intermittent
- 6th Field Subwatersheds
- Project Area

Ownership

- Bureau of Land Management
- U.S. Forest Service
- Private

Treatment

- Commercial Thinning
- Density Management
- Hazardous Fuels Reduction
- Precommercial Thinning
- Variable Density Thinning
- Oak Or Pine-Oak Restoration/Hazardous Fuels Reduction

Miles
0 1.5 3

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