



United States
Department of
Agriculture

Forest
Service

Mt. Hood National Forest

Hood River Ranger
District



Polallie Cooper Hazardous Fuels Reduction – Phase I

Final Decision Notice and Finding of No Significant Impact

USDA Forest Service
Hood River Ranger District
Mt. Hood National Forest
Hood River County, Oregon

Legal Description: T.1S., R.10E., S32-33; T.2 S.,R.09E., sec. 1-3, 10-15;
T.2S., R.10E., sec. 3-9, 17-18; Willamette Meridian



for the greatest good

DECISION AND RATIONALE

The Polallie Cooper Hazardous Fuels Reduction Environmental Assessment (EA) contains an in-depth discussion of the setting, ecological processes, resource conditions, purpose and need for action, proposed action, project design criteria/mitigation measures, alternatives considered, environmental consequences and benefits of the alternatives as well as appendices which include collaborative group recommendations and a discussion of comments received. This project is being completed under the Healthy Forest Restoration Act (HFRA).

The Polallie Cooper Hazardous Fuels Reduction Planning area is located on the Hood River Ranger District of the Mt. Hood National Forest. The entire 7,300 acre planning area falls within the East Fork Hood River watershed.

Because of the very real threat to neighboring communities located within and adjacent to the Wildland Urban Interface (WUI), but because of the concerns over the pending designation of the Crystal Springs Watershed Special Resources Management Unit (SRMU) and the ongoing litigation over the Wild and Scenic Rivers, I have decided to implement the Polallie Cooper Hazardous Fuels Reduction Project in two phases.

The first phase of implementation would include all fuels reduction activities that are outside of the SRMU and Wild and Scenic Rivers. This approach allows for the reduced risk to neighboring communities and defers a decision for treatment within the Special Resources Management Unit and Wild and Scenic Rivers until the conclusion of the Cooper Spur-Government Camp Land Exchange and the Wild and Scenic Rivers' legal complaint.

It is important to protect and manage the resources and values essential to the American public. As such, reducing the risk of fire continues to be a high priority for the last untreated WUI in Hood River County, as well as meeting the intentions outlined in the 2009 Omnibus Act.

Over the past several decades, the combination of fire exclusion, several large scale disturbance events, endemic insect mortality and logging activities has resulted in higher stand densities, increased fuel, changed species composition, and an altered fire regime. Because of these conditions, there exists the threat of a large scale disturbance outside of the range that historically occurred on the landscape that could threaten both NFS land and adjacent privately owned lands.

A suite of fuel treatments would be applied depending on site, on the surface fuel loading, and desired future condition. The desired future condition of the project is to develop an uneven-aged stand with canopy closure that would allow fire behavior to change from crown fire to surface fire, and to have stand species composition reflecting historic conditions.

Within areas in the WUI and dryer sites, the desired future condition is to develop an uneven-aged stand with canopy closure that would allow fire behavior to change from crown fire to surface fire, and to have stand species composition reflecting a low departure from the central tendency of the natural (historical) regime. Achieving this desired future condition would assist in meeting the overall goals of the land use allocations and the Hood River County Community Wildfire Protection Plan (CWPP) within the planning area and recommendations within the East Fork Hood River Watershed Analysis.

Purpose and Need for Action (EA, Section 1.3)

Fire suppression efforts over the past 100 years, favorable climatic conditions, vegetation growth and dead fuel resulting from insects and diseases have altered stand composition and structure, and increased tree and brush densities. The high density of the stands contributes to mortality of trees because of competition for nutrients, water and sunlight. Because of these conditions, there exists the threat of a large-scale disturbance outside of the range that historically occurred on the landscape that could threaten both NFS land and adjacent privately owned lands.

The overall purpose of this proposal is to reduce the fire hazard in order to protect life and property and to restore the forest to conditions that are more resilient to wildfire on National Forest System (NFS) lands. This planning area is the last untreated wildland urban interface (WUI) on the eastside of the Mt. Hood National Forest and is supported by the Hood River County CWPP. Given this condition, this project has the following needs:

- Reduce or maintain levels of hazardous fuel, including surface, ladder, and crown fuel to reduce the risk of undesirable effects of wildfire on NFS lands and adjacent privately owned land;
- Create defensible space in the communities throughout the WUI to meet the objectives and goals of the CWPP;
- Move the landscape toward more historic conditions to reduce fuel loading and restore forest resiliency;
- Reduce levels of hazardous fuel to protect Cooper Spur Ski Area recreation objectives and Cloud Cap Historic District special interest area objectives;
- Reduce the risk of large stand replacing events using management strategies such as thinning overstory and understory trees (thinning from below), prescribed burning, piling and burning, masticating of underbrush, reducing down woody fuel, and swamper burning; and,
- Move tree species composition to a higher proportion of fire tolerant ponderosa pine, western larch and Douglas-fir.

Management Direction (EA, Section 1.3.1)

The Polallie Cooper Hazardous Fuels Reduction Project is proposed to respond to goals and objectives of the Mt. Hood Land and Resource Management Plan, as amended (US Forest Service, 1990a) and the recommendations in the East Fork of Hood River Watershed Analysis (US Forest Service, 1996b). This Environmental Assessment has been completed in accordance with direction contained in the National Forest Management Act, the National Environmental Policy Act, the Council on Environmental Quality regulations, Clean Water Act, the Endangered Species Act and other applicable laws, policies and regulations.

The Environmental Assessment is tiered to the Mt. Hood National Forest Land and Resource Management Plan Final Environmental Impact Statement (US Forest Service, 1990b) and Record of Decision (US Forest Service, 1990c), and incorporates by reference the accompanying Forest Plan. The Forest Plan guides all natural resource management activities and establishes management standards and guidelines for the Forest. It describes resource management practices, levels of resource production and management, and the availability and suitability of lands for resource management. Goals, objectives and desired future conditions of the management areas within the planning area are discussed below in the description of land allocations. In addition, management direction for the area is provided in three major Forest Plan amendments:

- The Northwest Forest Plan (NWFP) - Record of Decision for Amendments to Forest Service and Bureau of Land Management Planning Documents Within the Range of the Northern Spotted Owl and Standards and Guidelines for Management of Habitat for Late-Successional and Old-Growth Forest Related Species Within the Range of the Northern Spotted Owl (1994);
- Survey and Manage – Record of Decision and Standards and Guidelines for Amendments to the Survey and Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines (2001); and,

- Invasive Plants– Pacific Northwest Invasive Plant Program Preventing and Managing Invasive Plants Record of Decision (2005).

Additionally, the Environmental Assessment considers and incorporates, as appropriate, the recommendations of the East Fork Hood River Watershed Analysis. The NWFP Record of Decision requires a watershed analysis for all Key Watersheds prior to resource management (page C-3). Watershed analysis is a systematic procedure to characterize the aquatic, riparian, and terrestrial features within a watershed. The information is used to refine riparian reserves boundaries, prescribe land management activities, including watershed restoration and develop monitoring programs (NWFP ROD page 10).

Desired Future Condition/Land Allocations (EA, Section 1.3.2/1.3.3)

The desired future condition of the project is to develop uneven-aged stands with canopy closure that would allow fire behavior to change from crown fire to surface fire, and to have stand species composition reflecting Condition Class 1. Achieving this desired future condition would enable meeting the overall goals of the land allocations within the planning area. The desired future condition for the upland and riparian vegetation treatments areas is a multi-layer canopy with large diameter trees, well-developed understory, more than one age class, and snags and down woody debris.

Within areas in the Wildland Urban Interface (WUI) and dryer sites, the desired future condition is to develop an uneven-aged stand with canopy closure that would allow fire behavior to change from crown fire to surface fire, and to have stand species composition reflecting a Condition Class 1, low departure from the central tendency of the natural (historical) regime. Achieving this desired future condition would assist in meeting the overall goals of the LUAs and the CWPP within the planning area and recommendations within the watershed analysis as described below. Figure 2-3 of the EA illustrate the existing conditions and desired future conditions for the vegetation treatments throughout the planning area.

Several land allocations as designated by the Forest Plan and NWFP are found within the project area. See EA, Figure 4 for a map of the NWFP land use allocations and Figure 5 for a map of the Forest Plan land use allocations within the planning area.

Other management direction for the Polallie Cooper Hazardous Fuels Reduction project comes from the NWFP. The Matrix consists of those federal lands outside the six categories of designated areas (Congressionally Reserved Areas, Late-Successional Reserves, Adaptive Management Areas, Managed Late-Successional Areas, Administratively Withdrawn Areas, and Riparian Reserves). Most timber harvest and other silvicultural activities would be conducted in that portion of the Matrix (72%) with suitable forest lands, according to standards and guidelines. Fuel reduction activities have also been prescribed for sections of Riparian Reserve (10%), Administratively Withdrawn (1%), and Congressionally Reserved Areas (17%).

Decision

As the District Ranger on the Hood River Ranger District, I make decisions in full consideration of the land resources, national interests and the local communities that would be affected. I search for a balance among these resources, interests, economic and socio-political considerations. My decision is based on consideration of the best available science and how it relates to current resource conditions and the purpose and need for action in the planning area.

I have listened to presentations and discussions with collaborative groups and comments during meetings with the public and local leaders. I have reviewed the public comments received during scoping and on the draft Environmental Assessment and draft Decision Notice. While there were several thousand comments covering a wide range of topics, it was clear that taking any action within the Crystal Springs Watershed SRMU prior to the designation of the land use allocation was a critical concern. Additionally,

members of the federal and state legislature asked that we defer the decision on the project until the Government Camp-Cooper Spur Land Exchange is completed and all of the associated provisions of the Omnibus Public Lands Management Act of 2009 (PL 111-11) for the Mt. Hood National Forest are enacted.

Additionally, on March 14, 2017, Pacific Coast Federation of Fisheries Associations and Institute for Fisheries Resources filed a complaint in the District of Oregon alleging that the Forest Service failed to comply with Wild and Scenic Rivers Act (WSRA) requirements to establish detailed boundaries and adopt comprehensive river management plans for nine river segments on the Mt. Hood National Forest. Congress designated the nine river segments as wild, scenic or recreational rivers under the Omnibus Public Lands Management Act of 2009. One of the segments is the East Fork Hood River, from Oregon State Highway 35 to the Forest's boundary. Congress designated this segment as "recreational," and the Forest has been managing it as such.

Approximately three miles of this segment are located within the Polallie Cooper Hazardous Fuels Reduction project area. With this decision, I am removing the proposed treatments within the interim river corridor boundary of one-quarter mile. Removing this portion of the project from my decision would further the Forest's efforts to resolve the case and to complete the important work of establishing a detailed boundary and adopting a comprehensive river management plan for the East Fork Hood River.

Accordingly, this decision does not include 412 acres of variable density thinning of unmanaged stands within the interim Wild and Scenic River corridor. This decision also removes approximately ½ mile of temporary road construction from the interim Wild and Scenic River corridor. Once the Forest has completed a detailed boundary and comprehensive river management plan and the Government Camp-Cooper Spur Land Exchange, the Forest will re-visit the NEPA analysis for the Polallie Cooper Hazardous Fuels Reduction project to ensure consistency with management direction.

I appreciate the passion that those who participated in this project's public engagement have on the topic. All of the issues that were received are summarized in the final Environmental Assessment and in the response to comments. To be responsive to these comments, I have proposed to implement the project in two phases. This decision to phase implementation is in response to feedback and would implement treatments outside of the Crystal Springs Watershed SRMU and the interim Wild and Scenic River corridor.

I have also updated this decision to reflect the conversations held during and after an objection resolution meeting held on October 23, 2017. At this meeting, the Objection Reviewing Officer, Forest Supervisor Lisa Northrop, and I met with representatives from three organizations who filed objections to the Draft Decision Notice to discuss opportunities for resolution. The objections were from Bark and Oregon Wild (who filed their objection jointly) and the American Forest Resources Council. Based on our discussions, I have agreed to remove the plantation unit in Block 9, which is approximately 23 acres, from this decision. I have also agreed to remove all temporary roads located below the unnamed stream, which is approximately two miles, in Block 10 from this decision. Thirdly, I have agreed to map and manage a potentially wet area in Block 11 as a Riparian Reserve, if confirmed by a Forest Service Hydrologist. Based on these agreements made with the objectors, they withdrew their objections to this project.

Appendix 1 of this Decision Notice contains a map of this final decision, as modified by the objection resolution process, as well as unit-specific information for all vegetation treatments. All project design criteria/mitigation measures (PDC) for the entire planning area are included in Appendix 2 of this document. The PDC are intended to avoid, minimize, rectify, reduce, eliminate and/or compensate for project impacts. The PDC are an integral and required component of this project.

Modified Phase I Proposed Action

Throughout the remainder of the Decision Notice, the Modified Phase I Proposed Action will be the proposed action from the Final Environmental Analysis outside of the Crystal Springs Watershed SRMU and the interim Wild and Scenic River corridor, as well as removal of the plantation unit in Block 9 and temporary road construction below an unnamed stream in Block 10.

The anticipated effects on the human environment from the Modified Phase I Proposed Action are expected to be less than those disclosed from the Proposed Action in the EA throughout Chapter 3, however, I intend to implement the treatments proposed within the Crystal Springs Watershed SRMU and the interim Wild and Scenic River corridor upon completion of the Government Camp-Cooper Spur Land Exchange and the detailed boundary and comprehensive river management plan for the East Fork Hood River.

Vegetation Treatments (EA, Sections 2.2.1)

The Modified Phase I Proposed Action includes treating approximately 1,165 acres within the East Fork Hood River Watersheds (Appendix 1). The Modified Phase I Proposed Action includes sapling thinning, plantation thinning, and recently unmanaged stand thinning located outside of the Crystal Springs Watershed SRMU. Logging system access would be areas that include but are not limited to skyline corridors, skid trails, landings, and temporary roads. The Modified Phase I Proposed Action is summarized in Table 1 and the entire Proposed Action and is fully described in EA, Section 2.2.

Table 1. Modified Phase I Proposed Action Treatments

Proposed Action	Acres
Recently Unmanaged Stand Thinning	754
Plantation Thinning	33
Sapling Thinning	378
Total	1,165

All thinning activities proposed in this project would apply variable density thinning (VDT), which allows flexible local density levels to achieve overall treatment objectives. This allows emphasis to be placed on leaving vigorous trees of all sizes without concern for spacing. Leave tree spacing associated with VDT would vary within and between units. Tree density would be measured by basal area, canopy closure, trees per acre or relative density depending on the circumstances for each unit. Additionally, fuel treatments in harvested stands would be applied when all thinning treatments have been completed. This is expected to be within five years of mechanized treatments. Post-activity assessments would be completed to determine specifically when, where, and which fuel treatments would be applied.

Within moist mixed conifer sites, desired densities range from 80-150 ft²/acre basal area to approximately 40% canopy closure. Within dry mixed conifer sites, the desired densities range from 80-190 ft²/acre basal area and to approximately 38% canopy closure. The desired basal area would be accomplished throughout the stand, providing for opportunities to have VDT across the stand, achieving goals across the planning area (see Figure 8 of the EA for desired basal area).

Included in VDT are skips and gaps, which are intended to mimic more natural structural stand diversity. Skips are areas where no trees would be removed; gaps are areas where few trees would be retained. The gaps for this project would vary from one to five acres in size based on the stand specific conditions and treatment types within each block, and are outlined by Block in Section 2.3, Project Design Criteria.

The criteria used to determine the gap size was based on the collaborative group's recommendations (EA Appendix 1) and would include percentage of shrub cover present; existing disease pockets; existing shade intolerant species; and plant association. Gaps are intended to create openings to support regeneration of shade intolerant species and more rot resistant species while also providing structural diversity. Gap areas would be incorporated into the average target canopy cover identified in Table 7 of the EA. Gaps would be created in root disease pockets. Gaps would be reforested in accordance with site conditions. Field surveys indicate that gaps would not be needed in Riparian Reserves to meet silvicultural objectives.

In the western and central portion of the planning area outside of the Crystal Springs Watershed SRMU (Block 9) no gaps would be placed in plantations under 20 years old. In plantations over 20 years old (within Blocks 1-3, 6, 7 and 9) gap sizes would not exceed 5 acres and would maintain a minimum of 30% canopy cover. Gaps larger than 2 acres within commercial plantations would be focused in dry plant communities and/or around forest health concerns. Gaps in recently unmanaged stands (Blocks 8, 10, and 11) would be no more than 2 acres.

In the eastern portion of the planning area (Blocks 12-19) gaps in commercial plantations (Block 17) would not exceed 5 acres and would maintain a minimum of 30% canopy cover. In recently unmanaged stands (Blocks 12-16, 18, and 19) gaps would be no more than 2 acres.

Fuel Treatments (EA, Section 2.2.2)

In addition to the vegetation treatments that would reduce fuel loading and fire risk in the planning area, a variety of fuel treatment methods would be used throughout the project area within the Modified Phase I Proposed Action. A full description of each of the different types of fuel treatments is located in Section 2.2.2 of the EA. The goal for the area is to reduce the fuel loadings and modify the fuel profiles of the planning area.

Treatment of any residual surface fuel left over from timber harvest would be reduced through the fuel treatments. Underburning could also be used to treat any residual fuel left on harvested blocks. Surface fuel would be reduced from approximately 25-55 tons per acres to 15 tons per acre on the dry plant communities of the planning area and from 45-60 tons per acre to 25 tons per acre in the moist plant communities within the planning area.

It is likely that an area would need to have an initial vegetation treatment to reduce the horizontal and vertical fuel prior to safely and effectively applying a suite of prescribed fire techniques. An example would be a block that is first treated with a vegetation treatment, and the slash materials are piled.

Burning of the piles may occur the following year, and would then be followed by a series of underburning several years after the initial treatment.

Road Closures Temporary Roads and Road Maintenance (EA, Sections 2.2.5, 2.2.4 and 2.2.6)

All of the National Forest System roads within the planning area were analyzed to determine if road closures were appropriate following the completion of the proposed vegetation treatments to support fuel reduction efforts.

The proposed action would administratively close approximately 1.6 miles of road, however these roads are located within the Crystal Springs Watershed SRMU and therefore not included in this Decision. Please see EA Section 2.2.5 for more information about road closure in the planning area that would be included in Phase II.

Construction of temporary roads as well as maintenance of system roads needed for activities outlined in the Modified Phase I Proposed Action are included in this Decision. The project includes proposed temporary roads that were identified to facilitate conventional logging systems (ground-based and skyline yarding). The exact locations of temporary roads may change during the layout phase of this project, but

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the total mileage of the temporary roads would not exceed approximately 4.3 miles. It is my intent to have the temporary roads located as depicted in the map in Appendix 1; however, they may need to be adjusted slightly during the layout phase. Any changes would have to meet the design criteria stated in EA, Section 2.2.4 and all Project Design Criteria (Appendix 2).

Road maintenance and reconstruction is necessary on haul routes identified for this project. Some roads would be repaired to a minimum standard for both safety and resource protection before use. No new permanent road construction would be necessary. The maintenance and reconstruction activities include blading, brushing, adding rock in small sections, cleaning or reconditioning the ditch, and adding drainage features. Section 2.2.6 of the EA contains all the road reconstruction and maintenance needs for the entire planning area.

Only those maintenance and reconstruction activities on roads outside of the Crystal Springs Watershed SRMU and below the unnamed stream in Block 10 are included in this decision. The only road that may be used for activities (but has no maintenance or reconstruction) in this decision that is within the SRMU is the 3510/Cooper Spur Road. This is a paved, two-lane road maintained by Hood River County and traverses both in and out of the SRMU.

Forest Plan Exceptions (EA, Section 2.6.1)

There are some Forest Plan standards that would not be met in order to meet the purpose and need for action as described above. Exceptions to the Forest Plan standards are allowed under the Forest Plan, if they are identified during the interdisciplinary process. The exceptions were identified during the interdisciplinary planning analysis and the IDT process concluded that these exceptions were within the purpose and need for action. Forest Plan page 4-45 states that for “should” standards “action is required; however, case-by-case exceptions are acceptable if identified during interdisciplinary project planning, environmental analyses. Exceptions are to be documented in environmental analysis (National Environmental Policy Act 1969) public documents.” Also, the exceptions were shared with the public during the scoping, comment, and objection periods. All other standards and guidelines are expected to be met with this proposal.

- Snags and Down Log Associated Species (FW-215): Where new timber harvest blocks occur (e.g., regeneration harvest and commercial thinning), wildlife trees (i.e., snags and green reserve trees) should be maintained in sufficient quantity and quality to support over time at least 60 percent of the maximum biological potential of primary cavity nesting species, e.g., woodpeckers.
- Snags and Down Log Associated Species (FW-219): An average total of at least 6 logs per acre in decomposition classes 1, 2 and 3 (USDA Forest Service 1985, Brown editor) should be retained in all project activity areas, e.g., clearcut, commercial thin, salvage, or overwood removal.

Overall, these standards cannot be met because of the on-the-ground conditions present within the stands. Implementation of the proposed action would reduce the amount of small snag recruitment that would have occurred through the process of stress and mortality in the next 20 to 30 years. Some of the snags and downed logs that might have formed from the death of the intermediate and suppressed trees would be removed by thinning activities. As a result, the attainment of moderate-sized snags and down wood would be delayed because of the reduction in density of the stands, which would reduce the levels of suppression mortality. For more information see Section 3.8, Wildlife.

Best Management Practices (EA, Section 2.6.3)

Best Management Practices (BMPs) are defined as “methods, measures or practices selected by an agency to meet its nonpoint source control needs.” Appendix H of the Forest Plan provides management direction on the BMP implementation process. Further, according to the Northwest Forest Plan, BMPs would be incorporated into the implementation of the project. BMPs are drawn from General Water Quality Best Management Practices, Pacific Northwest Region (November 1988); Draft Environmental Protection

Polallie Cooper – Final Decision Notice and Finding of No Significant Impact Agency Region 10 Source Water Protection Best Management Practices for USFS, BLM (April 2005); Mt. Hood National Forest Standards and Guidelines, Northwest Forest Plan Standards and Guidelines and The National Best Management Practices for Water Quality Management on National Forest System Lands - Volume 1: National Core BMP Technical Guide (April 2012) and professional judgment.

BMPs have been adjusted and refined to fit local conditions and then incorporated in the project design criteria/mitigation measures as described in Appendix 2 as well as the standard contract language for implementing these projects. The appendix includes all the required components of the site-specific BMPs as specified in Appendix H of the Forest Plan, including BMP title, objective, explanation, ability to implement, effectiveness, and monitoring. In addition, the site-specific BMP table provides a cross-walk with the PDC and planning process. These BMPs effectiveness is discussed in Chapter 3 of the EA (see the EA, Section 3.6, Water Quality and Section 3.7, Fisheries & Aquatic Fauna).

I find that the refined BMPs selected for this project can be implemented and effective based on past experience, pertinent research described in Chapter 3 of the EA, and monitoring on the Mt. Hood National Forest. Also, I find that the information contained in Appendix 2 fully complies with the management direction contained in Appendix H of the Forest Plan.

Rationale for Decision

The analysis in the Final EA presents a large body of science and site specific data supporting the effects analysis. I believe the actions described in the Proposed Action with a phased implementation would meet the overall purpose of the project to reduce the threat of large scale disturbance on many of the acres in the planning area while responding to the requests of the congressional delegation. The vegetation treatments meet the objectives of the project by implementing treatments that would fully meet the purpose and need for action by moving the forested stands towards a more historic, functioning system.

The Modified Phase I Proposed Action would reduce or maintain levels of hazardous fuel, including surface, ladder, and crown fuel to reduce the risk of unwanted effects of wildfire on NFS lands and adjacent privately owned land. While the majority of the WUI is located within the Crystal Springs Watershed Special Resources Management Unit, there are still opportunities to reduce fuel loadings to minimize the risk of wildfire starts and large scale disturbance within portions of the WUI and to adjacent private landowners.

This decision excludes many of the areas located within the WUI and that were highlighted as the highest priority by members of the collaborative group. By not treating these acres, there is an elevated risk that an uncharacteristic wildfire could occur within the SRMU and impact the quantity and quality of water available to the Crystal Springs Water District. Because of the concerns of the public and stakeholders, I am willing to postpone this action until after the conclusion of the land exchange. However, I am absolutely motivated to treat the remainder of the planning area under a Phase II decision.

Within the treated areas, forest resilience would be improved by increasing the health and vigor and enhancing diameter and height growth, resulting in more historic conditions and an increase in the restoration of forest resiliency to natural disturbances. Thinning would improve vertical and horizontal diversity by variable spacing and creating small skips and gaps. The Vegetation Resources section of the EA (Section 3.1) fully demonstrates the improvements to diversity and resiliency that would result from this action.

I believe that the Modified Phase I Proposed Action strikes an appropriate balance between the need to reduce the risk of wildfire, create defensible space in adjacent communities, move the landscape towards more historic conditions while also protecting the natural resources and providing for essential habitat restoration opportunities.

I feel the Modified Phase I Proposed Action considered all comments received during the collaborative process (EA Section 1.6.1), scoping period, notice and comment period (EA Section 1.6.2-1.6.3), and objection period. My decision balances the comments received from all stakeholders and the final Proposed Action in the EA. The comments that provoked the most discussion related to the Crystal

Springs Watershed Special Resources Management Unit, temporary roads, and trail buffer are discussed below.

Crystal Springs Watershed Special Resources Management Unit

Several comments stated that the Proposed Action was not consistent with the Omnibus Act. While the Final EA speaks to their concerns in Section 1.7.1, this decision does not include any areas that overlap with the Crystal Springs Watershed SRMU. Additionally, this decision outlines the rationale for a phased implementation above. These concerns are fully disclosed in the EA and will be addressed further in the Phase II decision.

Wild and Scenic River

Due to the Pacific Coast Federation of Fisheries Associations and Institute for Fisheries Resources complaint in the District of Oregon alleging that the Forest Service failed to comply with WSRA requirements to establish detailed boundaries and adopt comprehensive river management plans for nine river segments on the Mt. Hood National Forest, I am removing the proposed treatments within the interim river corridor boundary. Once the Forest has completed a detailed boundary and comprehensive river management plan, the Forest will re-visit the NEPA analysis for the Polallie Cooper Hazardous Fuels Reduction project to ensure consistency with management direction.

Temporary roads

Comments raised a concern about the reopening of old road alignments and the construction of new temporary roads, both inside and outside of the Crystal Springs Watershed SRMU. This decision only applies to areas outside of the Crystal Springs Watershed SRMU, so the additional protection measures and comments specifically about this area will not be further discussed. However, temporary roads in other areas were also highlighted as a concern.

The commenters felt the ground disturbance associated with this work, particularly where it is in close proximity to streams, could affect aquatic resources. The commenters also were concerned about the cost-benefit analysis associated with the use of temporary roads. The development of another alternative was considered, but eliminated from detailed study looked at an alternative with no temporary roads where treatments were removed from the proposal, as well as one where the stands were treated utilizing helicopter logging systems to reduce the need for temporary roads while still accomplishing some of the proposed actions. This alternative is outlined below as well as in the EA (EA, Section 2.5.2 and Section 2.5.3).

For the Polallie Cooper Hazardous Fuels Reduction Project, temporary roads were placed on previous road locations where possible, unless they were in close proximity to a stream. The temporary roads are located on decommissioned roads that had an aquatic risk rating of low to moderate. By design none of the temporary roads are hydrologically connected to any stream channel. As required by the PDC, all temporary roads, skid trails, and landings would be rehabilitated after project activities are completed in each unit. As such, I feel the temporary roads are the most ecologically and economically appropriate method to implement the fuel reduction treatment. This was analyzed as two unique alternatives considered below.

Trail Buffers

The collaborative group recommended that a buffer be provided around trails “Where possible, maintain higher canopy cover around trails. Lightest touch within 50’ of trail, lighter touch within 100’ of trails in order to protect watershed and maintain soil moisture levels that help preserve trails.” In the development of the proposed action, the IDT utilized solar modeling to determine the overstory buffer needed to protect the trail tread from drying out due to impacts from reduced canopy. These models indicated that a 55’ buffer where overstory canopy was maintained would provide the maximum amount of protection.

During our comment period on the Draft EA and through continued work with the collaborative group and the interested stakeholders, we had worked together to further my understanding of the rationale for the 50' lightest touch, 100' light touch that the collaborative group had recommended. Because of the continued relationship and concern, I have decided to implement a 100' buffer where overstory canopy would be maintained. This would occur where treatment areas overlap the trail. All of the additional PDCs related to trail crossing have also been maintained to protect the forest users experience along the Dog River Trail. This change has been documented and reflected in the Final EA and would apply to this decision where applicable.

In conclusion, I believe that the Modified Phase I Proposed Action reflects the integration of effective land management objectives at a very high standard, is responsive to public comment, and fully meets the purpose and need for this project.

Alternatives Considered and Reasons for Non Selection

No Action Alternative (EA, Section 2.1)

Under the No Action alternative, current management plans would continue to guide management of the area. No fuel reduction thinning, burning or other associated actions would be implemented to accomplish project goals. Stands would continue to have high levels of surface, ladder, and crown fuel compared to historical conditions. Defensible space adjacent to private lands would remain overstocked and would not meet the objectives and goals of the CWPP. Stands would continue to remain uniformly dense and the overstocked condition would result in stands with reduced vigor, small trees, increased mortality, and decreased resilience. This reduced resiliency would put the forest at an increased risk of large stand replacing events.

Stand species composition would continue to not be resilient to wildfires and other disturbance activities. Ponderosa pine, western larch and Douglas-fir would continue to compete poorly for nutrients and resources from the historical lack of disturbance activities. Fire resilience in stands would be poor from both small and large scale future events.

Additionally, the riparian conditions would not be improved. Over the next 50 years there would be more trees dying and then falling in Riparian Reserves as the stands decay. As such, there would be an increase in the amount of down wood, but this wood would generally be smaller in diameter and thus would decay faster both in and out of stream channels. Fewer trees would grow to a larger size that would last longer once on-the-ground and in larger streams provide more stable habitat. See Section 3.5, Water Quality and Section 3.6, Fisheries and Aquatic Fauna in the EA for more impacts on the riparian areas.

In areas of the Cooper Spur Ski Area and Cloud Cap Historic District, fuels would continue to build and the likelihood of a wildfire event that put these resources at risk would continue to rise. The historic and recreational objectives of these areas would likely not be met after a wildfire.

The No Action Alternative would not maintain, repair or close any roads. The current use pattern of roads within the planning area would not change. Volume of public use on this system would not change over the near term, but could decrease slightly over time due to decreased navigability of the roads. Administrative use on this system would not change. No action would mean that current minimal road maintenance would occur, and no road reconstruction would occur. Lack of road maintenance exhibits a

strong adverse effect with respect to both safety and the environment. Road surface, road subgrade, and road base failures present physical hazards to drivers, reduce a driver's ability to maintain positive control of a vehicle, and increase the potential for the development of erosion hazards on road slopes including soil slumps and slides due to pooling of water and increased soil saturation in the road bed.

I did not select this alternative because the level of hazardous fuel to reduce the risk of unwanted effects of wildfire on NFS lands and adjacent privately owned land within the WUI would not be reduced. This alternative would not meet the purpose and need for action on moving the landscape towards more historic conditions while reducing the risk of wildfire.

Crystal Springs Watershed Special Resources Management Unit (EA, Section 2.5.1)

An alternative was considered but eliminated from detailed study that would have no fuel reduction treatment inside the Crystal Springs Watershed SRMU, outside of any area located not more than 400 feet from structures located on private land adjacent to National Forest System land, or in any area located not more than 400 feet from the Cooper Spur Road, the Cloud Cap Road, or the Cooper Spur Ski Area Loop Road. This alternative also would not construct any temporary roads within the SRMU. This alternative was analyzed in response to comments received.

While this decision would not treat any of the areas inside of the Crystal Springs Watershed SRMU, these areas are still in need of treatment. Because of the very real threat to neighboring communities located within and adjacent to the Wildland Urban Interface (WUI), but because of the concerns over the pending designation of the Crystal Springs Watershed Special Resources Management Unit, I have decided to implement the Polallie Cooper Hazardous Fuels Reduction Project in two phases. This approach allows for the reduced risk to neighboring communities and defers the decision for treatment within the Special Resources Management Unit until the unit is formally adopted with the completion of the Cooper Spur-Government Camp Land Exchange.

This alternative was developed to determine the impact on the purpose and need of the project. The majority of the acres proposed for treatment in the SRMU are plantation thinning and sapling thinning. The overall desire for these treatments would be to move the riparian and upland portions of the selected plantations towards a more late seral-like structure with a large tree component that is currently absent in the majority of these stands.

These areas in the SRMU make up 80% of the plantation thinning and sapling thinning units in planning area that would not be treated under this alternative. Additionally, to create defensible space that would be effective for a wildfire along the property boundary with private land, the vegetation within the 400 foot buffer would need to be reduced to a much lower density. Currently, most of this area proposed to move the canopy cover to between 30% and 50% based on site specific information as shown in Table 6 of the EA. To move an uncontrolled wildfire that is crown dominated to the surface would require that canopy covers be lowered substantially below 30% for the 400 foot buffer.

Additionally, the majority (70%) of the temporary roads in the SRMU are placed on existing roadbeds. These 3.26 miles of existing temporary roads within the SRMU would follow all of the BMPs located in the PDC and have been developed to minimize and reduce the impacts of their use to resources. The 1.4 miles of new temporary roads would be constructed outside of riparian areas and would pose an overall low risk of introducing sediment to streams. Section 2.3.5 of the EA includes additional PDCs for activities occurring inside of the SRMU to further reduce and minimize impacts from activities on water quality. Section 3.5, Water Quality Effects Analysis in the EA outlines the effects to water quality from the Proposed Action, including any temporary road construction.

Further, to treat many of the areas outlined in this alternative, including those along private land, either temporary roads would need to be constructed, or the area would need to be treated using helicopters. By not constructing temporary roads and not treating these areas within 400 feet of the property boundary,

the project would not meet the purpose and need for the planning area further, and would be at a greater risk for a large scale wildfire and effects to adjacent private land in the WUI. By utilizing helicopters, cost of implementation would increase by almost 60% (EA Section 2.5.3), the fuel reduction work would be cost prohibitive and there is a higher risk of the sale not being implemented.

Additionally, through helicopter harvest methods, the desired canopy cover and basal area targets for the planning area can be met. However, existing and created fuel loading on the ground can be more difficult or impossible to reduce through this treatment type.

The effects to the purpose and need from no temporary road construction are discussed in further detail in Section 2.5.2 of the EA where the effects of not building temporary roads and the acres treated from those roads would be removed, and Section 2.5.3 of the EA, where the harvest method is changed from ground based or skyline from temporary roads to helicopter logging systems.

I did not select this alternative because while there may be the ability to create an effective fuel break in this alternative, it would not move the landscape toward more historic conditions in this area. These areas are some of the most important to treat because they are situated within the WUI, have the highest density trees per acre, are the most furthest removed from their historical range of variability and are in the closest proximity to private land. As such, this alternative was not considered in detail because it does not fully meet the purpose and need for action.

No Temporary Road Alternative – Remove Acres Treated from Temporary Roads (EA, Section 2.5.2)

An alternative was considered but eliminated from detailed study that would not build any temporary roads to avoid impacts to the water quality and aquatic habitat. See section 1.7.2, of the EA Use of Temporary Roads. This alternative would impact 926 acres of the entire Proposed Action.

The alternative approach would reduce the proposed action from 2,373 acres to 1,447 acres. In this alternative, all of the treatment areas that would have helicopter yarding were maintained. For treatment areas with ground base harvest methods, they would be retained if they were within 600 feet of an existing system road, and would not have to cross a stream or other area that would cause additional impacts. For treatment blocks with skyline harvest methods, areas where operations would be based off of existing roads were retained, and any harvest that was based off of temporary roads was removed.

In general, the less acres that are treated, the less effective fuel reduction treatments can be and would not reduce the risk of large stand replacing events. By reducing the fuel in large, contiguous stands, the agency would be more effective being able to reduce or maintain levels of hazardous fuel to reduce the risk of unwanted effects of wildfire on NFS lands. This holds true for adjacent privately owned land as well as create defensible space in the communities throughout the WUI to meet the objectives and goals of the CWPP.

When the areas that would no longer be treated in this alternative are viewed spatially in Figure 12 of the EA, it shows that many of the acres being removed in this alternative are those directly adjacent to private land. In this alternative, treatment Blocks 2, 3, 4, 7, 10 and 11 would have substantial portions of the treatment removed. The only treatment block that would have the majority of its interface of NFS and private land remaining is in Block 12, which represents a small portion of the available NFS/Private interface available for treatment.

For this decision, Blocks 10 and 11 would have the majority of their treatment areas reduced, lessening the impact of the fuel reduction treatment, and not addressing many of the primary purposes of this project.

I did not select this alternative because the alternative would not meet the purpose and need for the project because of the limited fuel reduction occurring along private land within the WUI and within areas that are Fire Regime Condition Class 3. Since this would not allow for fuel reduction in some of the most critical areas, this alternative was eliminated from detailed study.

No Temporary Road Alternative – Change Harvest Method to Helicopter (EA, Section 2.5.3)

A third alternative was considered but eliminated from detailed study that would treat all the areas that require temporary roads with helicopters. This alternative removes the need to build temporary roads, but still completes some of the fuel reduction thinning in the planning area. There were two reasons for not fully analyzing this alternative; cost and ability to effectively treat fuel.

In order to treat these stands without utilizing temporary roads approximately 50% of the proposed treatment acres would need to be helicopter yarded. This would be an increase from less than 20% as shown in Section 2.5.3 of the EA. The cost of implementing this project would increase approximately 60% over the Proposed Action due to the large increase in helicopter yarding requirements. The table below outlines the changes in harvest methods to treat the acres and the estimated costs associated with these treatments, comparing the Proposed Action Alternative to this alternative not fully developed.

Based on past experience with thinning’s in comparable stands and utilizing available stand data, it is not reasonable to expect that there would be sufficient value of timber removed to accomplish the proposed treatments with this increased cost.

Table 2. Cost of Hazardous Fuel Reduction Treatments in the Proposed Action and No Temporary Road - Change Harvest Method to Helicopter Alternative

	Proposed Action (Acres)	Proposed Action (Cost)	No Temp Road Alternative (Acres)	No Temp Road Alternative (Cost)	Change (Cost)
Ground Based	1,473	\$1,666,604	975	\$1,103,150	\$(-563,454)
Skyline	570	\$1,003,787	232	\$408,559	\$(-595,228)
Helicopter	330	\$1,490,128	1,166	\$5,265,119	\$3,774,991
Total	2,373	\$4,160,519	2,373	\$6,776,828	\$2,616,309

Additionally, through helicopter harvest methods, the desired canopy cover and basal area targets for the planning area can be met. However, existing and created fuel loading on the ground can be more difficult or not viable to reduce through this treatment type.

I did not select this alternative because as a hazardous fuel reduction project, with a purpose to reduce or maintain levels of hazardous fuel, including surface, ladder, and crown fuel to reduce the risk of unwanted effects of wildfire, this alternative does not meet the purpose and need for the project.

Public Involvement (EA, Section 1.6.2)

Polallie Cooper was listed in the Mt. Hood National Forest quarterly planning newsletter (Schedule of Proposed Action [SOPA]) beginning in February 2013. The project was also listed on the Mt. Hood National Forest website beginning in October 2012. In February 2015, a scoping letter providing information and seeking public comment was mailed to approximately 160 individuals and groups. Approximately 1,229 comments were received during the public scoping period. Over 1,220 comments were form letters received from members of Bark and Oregon Wild. The remaining seven comments received were from Oregon Wild, Bark, Hood River Valley Residents Committee, Cooper Spur Wild and Free Coalition, Friends of Mt. Hood, Hood River Collaborative Stewardship Crew, and American Forest Resource Council.

An additional 30-day comment period was provided to improve the level of clarity with our collaborators and stakeholders. While this comment period was not required, the Responsible Official wanted to provide the Draft EA for review prior to the public meeting. A public meeting was held at the Hood River Fire Station in Hood River, Oregon on February 10, 2016 to comply with requirements set forth by the Healthy Forest Restoration Act. Comments were collected at this public meeting and have been incorporated into the EA and copies are located in the project record. Input from the public led the Forest Service to respond by modifying the proposed action from the Draft EA, including a change from 55' to a 100' overstory trail buffer.

In addition to these scoping efforts, the Forest Service participated in government-to-government consultation as detailed in Chapter 4 of the EA.

Collaboration (EA, Section 1.6.1)

The Hood River Collaborative Stewardship Crew (Stew Crew) is made up of representatives from Confederated Tribes of Warm Springs, US Forest Service, local and state governmental agencies (Oregon Department of Fish & Wildlife, Oregon Department of Forestry, Hood River County), watershed groups (Hood River Watershed Group), non-profit groups (Bark, Oregon Wild, Crag Law Center, Rocky Mountain Elk Foundation, Backcountry Horseman), timber industry (WKO/High Cascade), and individual residents/landowners.

Collaborative participants met from October 2012 to August 2014 to identify restoration opportunities within the Polallie Cooper planning area. The group discussed a range of topics including fuel reduction, forest health, road maintenance, ecological needs, and legacy pine. The group participated in several field trips to visit potential treatment blocks and see the outcomes associated with a previous thinning project. In August of 2014, the Hood River Collaborative Stewardship Crew submitted recommendations for the Polallie Cooper Hazardous Fuels Reduction Project (see Appendix 1 of the EA). Notes and other applicable information from the Collaborative Group have been included in the Project Record and on the Hood River Collaborative Stew Crew websites (www.hrstewcrew.org).

Site-specific recommendations were developed for three different priority areas in the projects boundary. Area 1 included Treatment Blocks 1-8, 21 and 22, Area 2 included Treatment Blocks 9-11, and Area 3 included Treatment Blocks east of Highway 35. In Area 2 there was a lack of consensus for Treatment Blocks 9 and 10. All of the recommendations, including the discussion about the lack of consensus, are included in Appendix 1.

From these recommendations, I incorporated all of the recommendations from the Collaborative Group in Area 1 and Area 3 into the Proposed Action. In this decision, I have incorporated all of their recommendations including those that are south of the Polallie Creek because these areas are within the interim Wild and Scenic River corridor boundary.

Issues (EA, Section 1.7)

Issues serve to highlight effects or unintended consequences that may occur from the Proposed Action and alternatives, giving opportunities during the analysis to reduce adverse effects and compare trade-offs for the Responsible Official and public to understand. Issues are statements of cause and effect, linking environmental effects to actions, including the Proposed Action (Forest Service Handbook 1909.15, 12.4).

During the collaborative process, scoping and comment periods three issues were brought forward that generated additional alternatives considered but eliminated from detailed study. One alternative was designed to address concerns related to the Crystal Springs Watershed Special Resources Management Unit and the other two were designed to address concerns related to Temporary Roads. See the EA, Section 2.5, Alternatives Considered, but Eliminated from Detailed Study for further information.

In addition to the issues identified, there were several concerns (impacts from roads, trail buffers, visual impacts, snags and down logs, riparian reserves, cumulative impacts and best management practices) that were raised. Concerns identified during scoping were used to refine the Proposed Action as well as the effects analysis presented in Chapter 3. Responses to these comments are contained in Appendix 3 of the EA.

FINDING OF NO SIGNIFICANT IMPACT

Based on the site-specific environmental analysis documented in the EA and the comments received from the public, I have determined that this is not a major Federal action that would significantly affect the quality of the human environment; therefore, an Environmental Impact Statement is not needed. This determination is based on the design of the Proposed Action, context of the project, and the intensity factors (40 CFR 1508.27).

Context

Based on the documentation in the EA and project file, I find that the effects of the project are not significant as disclosed in Chapter 3 of the EA and would have a negligible effect at the District and Forest scale. The EA implements direction set forth in the Forest Plan, as amended. The Forest is comprised of about 1.1 million acres; the Hood River Ranger District encompasses about 209,284 acres of the Forest. The decision authorizes about 1,165 acres of vegetation treatments, which represents approximately 0.1% of the Forest and less than 0.6% of the Ranger District.

Additionally, this project occurs within one watershed (East Fork Hood River) and four subwatersheds (the Lower East Fork Hood River, the Middle East Fork Hood River, Upper Middle Fork Hood River, and Dog River subwatersheds), which encompass approximately 65,000 acres. This decision represents approximately 2% of the total area and only a small percentage of each subwatershed.

Table 3. Subwatersheds located in Polallie Cooper project boundary, acres of NFS lands and vegetation treatment

Subwatershed (SWS)	Acres in Subwatershed	Acres in NFS Land (percent of SWS)	Acres in Project Boundary (percent of SWS)	Acres with Modified Phase I Proposed Action (percent of SWS)
Lower East Fork Hood River	27,069	5,390 (20%)	280 (1%)	0 (0%)
Middle East Fork Hood River	16,958	14,169 (84%)	5,863 (35%)	761 (5%)
Dog River	8,150	7,825 (96%)	724 (9%)	403 (5%)
Upper Middle Fork Hood River	12,856	12,856 (100%)	138 (1%)	0 (0%)

Intensity

1. Analysis of the beneficial and adverse impacts

Adverse and beneficial impacts have been assessed and were not found to be significant. The beneficial effects of the action do not bias my finding of no significant environmental effects. The analysis considered not only the direct and indirect effects of the projects, but also their contribution to cumulative effects. Past, present and foreseeable future actions have been included in the analysis. Adverse effects from the Proposed Action have been minimized or eliminated through PDC (Appendix 2). The Proposed Action would not likely adversely affect listed fish (EA, Section 3.7.4) and is likely to adversely affect northern spotted owl (EA, Section 3.9.2). The proposed project was developed in coordination with the United States Fish and Wildlife Service (FWS) in order to maintain suitable habitat while reducing the threat of losing habitat from wildfires. There is little high-quality spotted owl habitat within the action area, and treatment units are not located within this habitat. The planning are currently has approximately 5,295 acres of dispersal habitat. The removal of 98 acres (1.85 percent) would not prevent owls from being able to disperse between blocks of suitable habitat within the planning area and to adjacent suitable habitat outside the planning area. As such, I find that the Proposed Action is not a significant federal action.

2. The degree to which the Proposed Action affects public health and safety:

I find there would be no significant effects to public health and safety from the proposed action. Not taking any action has the greatest risk to impact the health and safety of the public from the enhanced risk of large-scale wildfire. No public health and safety issues were raised during scoping or notice and comment periods (EA, Appendix 3, Response to Comments). Also, the project contains PDC (Appendix 2) to protect public health and safety during project implementation, including the removal of danger trees.

3. The unique characteristics of the geographic area:

No prime farmlands, parklands, wilderness, potential wilderness, inventoried roadless areas, unroaded areas or ecologically critical areas overlap within the treatment areas proposed. The East Fork Hood River was added to the Wild and Scenic River System in 2009 for its geologic/hydraulic outstandingly remarkable values as a recreational river.

With this decision, I am removing the proposed treatments within the interim river corridor boundary of one-quarter mile. Removing this portion of the project from my decision would further the Forest’s

efforts to resolve the case and to complete the important work of establishing a detailed boundary and adopting a comprehensive river management plan for the East Fork Hood River. Because this area is removed from this decision, there would be no impacts to the unique characteristics of this geographic area.

4. The degree to which the effects on the quality of the human environment are likely to be highly controversial:

The effects on the quality of the human environment are not likely to be highly controversial. While there may be some opposition to thinning in the Crystal Springs Watershed Special Resources Management Unit and on the interim river corridor boundary, I have concluded that the science behind plantation thinning is not highly controversial based on a review of the record and past action that shows a thorough review of relevant scientific information. I have also taken into account that opposition to thinning has been fully considered through documentation of the no action alternative. Because this decision does not enter these areas and the science behind plantation thinning is not highly controversial, I find that this decision is not highly controversial on the quality of the human environment.

5. The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks:

There were no highly uncertain, unique or unknown risks identified in the Polallie Cooper Hazardous Fuels Reduction EA. Several commenters to the Proposed Action have argued that the activities within the Crystal Springs Watershed Special Resource Management Unit are unique and contain unknown risks. However, similar treatments have been successfully accomplished in the City of the Dalles Watershed on the Barlow Ranger District of the Mt. Hood National Forest, where the Interdisciplinary Teams (IDT) also plans and implements fuel reduction treatments.

Because of the IDTs familiarity with these treatment types and activities in sensitive watersheds, the activities approved in this decision are routine projects similar to those that have been implemented under the Mt. Hood National Forest Land and Resource Management Plan over the past 15 years. The effects analyses discussed in Chapter 3 of the EA are based on sound scientific research as well as previous experience implementing thinning projects across the Forest and decommissioning, closing and storm proofing roads. None are unique or involve unknown risks.

6. The degree to which the action may establish a precedent for future actions with significant effects:

The action is not likely to establish a precedent for future actions with significant effects because this action is not unusual in and of itself, nor does it lead to any further actions that are unique. Similar projects have been conducted across Forest.

7. Whether the action is related to other actions with individually insignificant, but cumulatively significant impacts:

The analysis considered not only the direct and indirect effects of the Proposed Actions (EA, Section 2.2) with PDC (EA, Section 2.3), but also its contribution to cumulative effects. Past, present and foreseeable future projects and recent wildfires have been included in the analysis (EA, Table 15). Each resource effects analysis contained in the EA discusses cumulative effects; none were found to be significant (EA, Section 3.1.3, Vegetation Resources; Section 3.2.3, Fuels Management; Section 3.3.2, Air Quality/Smoke

Management; Section 3.4.3, Transportation; Section 3.5.3, Soil Productivity; Section 3.6.3, Water Quality; Section 3.7.3, Fisheries and Aquatic Fauna; Section 3.9.2-3.9.8, Wildlife; Section 3.10.3, Botany; Section 3.11.3, Invasive Plant Species; Section 3.12.3, Recreation; Section 3.13.3, Visual Quality; and, Section 3.14.3, Cultural Resources).

8. The degree to which the action may affect scientific, cultural, or historical resources:

The action would have no significant adverse effect on districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places (NRHP) and would not cause loss or destruction of significant scientific, cultural, or historical resources due to the project PDC that would be implemented as part of this project (Appendix 2).

9. The degree to which the action may adversely affect endangered or threatened species or habitat:

The action complies with the Endangered Species Act (ESA) of 1973 for aquatic and wildlife species. The project area contains three threatened aquatic species and two threatened wildlife species. No threatened, endangered or proposed botanical species are present in the project area. All required consultation has been initiated or completed as described below.

The anticipated impacts summarized in the EA Section 3.7.5 could have some localized effects to ESA listed fish and or habitat to stream reaches containing ESA-listed fish. Potential reductions in large wood recruitment and small increases in fine sediment from road maintenance **may affect, but are not likely to adversely affect ESA-listed fish species and designated/proposed critical in the action area.** Essential Fish Habitat for Chinook and Coho salmon would **not be adversely affected.**

Early involvement with NMFS was conducted in regard to listed anadromous fish species and their habitat that occur within or near the action area. A Biological Assessment has been completed for this project and a Letter of Concurrence was issued from NMFS on April 4, 2017 with an errata correction issued on May 15, 2017. The Forest will comply with all additional conservation recommendations set forth by NMFS (EA, Section 4.1.1).

There would be no effect to Grey Wolves from the Proposed Action. For Northern Spotted Owls, some habitat would be treated but the function of that habitat would be maintained after treatments. This includes 902 acres of dispersal, 168 acres of foraging, and 4 acres of nesting and roosting habitat. Treatments that degrade suitable habitat impact these stands by reducing the canopy cover, and by reducing shrubs, and other components that provide habitat for prey species. Although habitat within these units would be reduced in quality, it would still function as the same habitat as before treatment.

Fuels reduction is expected to have both negative and beneficial effects to spotted owl prey species. Some small mammals may be directly impacted due to smoke or the inability to escape. Other small mammals may not be affected if they are mobile, protected within large downed coarse wood, or able to move away from the fire or mastication activities. However, there may be long-term benefits from a low intensity burn or mastication that is expected to increase plant vigor and prey species forage production.

The effects to spotted owls for this project are covered under a formal consultation. This project is consistent with the Northwest Forest Plan and with the Revised Northern Spotted Owl

Recovery Actions 10 and 32

Recovery Action 10: Conserve spotted owl sites and high value spotted owl habitat to provide additional demographic support to the spotted owl populations.

The proposed project maintains the highest quality habitat within spotted owl territories. Treatments would be located outside of all core areas and between patches of this habitat which would reduce the likelihood of losing the remaining habitat from wildfire.

Recovery Action 32: Because spotted owl recovery requires well distributed, older and more structurally complex multi-layered conifer forests on Federal and non-federal lands across its range, land managers should work with the Service to maintain and restore such habitat while allowing for other threats, such as fire and insects, to be addressed by restoration management actions. These high-quality spotted owl habitat stands are characterized as having large diameter trees, high amounts of canopy cover, and decadence components such as broken-topped live trees, mistletoe, cavities, large snags, and fallen trees.

The proposed project was developed in coordination with the FWS in order to maintain suitable habitat while reducing the threat of losing habitat from wildfires. There is little high-quality spotted owl habitat within the action area, and treatment units are not located within this habitat.

All applicable Mt. Hood National Forest Land and Resource Management Plan Standards and Guidelines that apply to the Proposed Action alternatives and would be met. A formal BA was submitted to US Fish and Wildlife Service for the effects to northern spotted owls and northern spotted owl critical habitat.

A signed Biological Opinion was received on April 13, 2017 concluding that the Polallie Cooper Hazardous Fuels Reduction Project will not jeopardize the continued existence of the spotted owl, nor will it adversely modify spotted owl critical habitat. [FWS *reference*: 01EOFW00-2016-I-0385]

10. Whether the action threatens a violation of environmental laws or requirements:

This decision would not violate Federal, State, and local laws or requirements for the protection of the environment. Applicable laws and regulations were considered in the EA (Section 3.19). The action is consistent with the Forest Plan as described in the consistency section for each resource in the EA, Chapter 3 as well as described below. The Proposed Action is consistent with the National Forest Management Act regulations for vegetative management. There would be no regulated timber harvest on lands classified as unsuitable for timber production (36 CFR 219.14) and vegetation manipulation is in compliance with 36 CFR 219.27(b). The project complies with Executive Order 12898 regarding environmental justice (EA, Section 3.17). No disproportionately high adverse human or environmental effects on minorities and/or low-income populations were identified during the analysis or public scoping process.

Findings Required by Other Laws and Regulations

The project was prepared consistent with the requirements of the National Environmental Policy Act (NEPA), and other relevant Federal and State laws and regulations.

I find that the Proposed Action is consistent with the National Forest Management Act, including the management direction found in the Mt. Hood National Forest Land and Resource Management Plan, as amended. It is consistent with standards and guidelines specific to the relevant land allocations and it is consistent with the applicable Forest-wide standards and guidelines. Each resource section in Chapter 3 discusses consistency with the Forest Plan and Northwest Forest Plan. Additionally, I find that the Proposed Action is consistent with the major amendments to the Forest Plan as described below.

I find that this decision is consistent with the Record of Decision and Standards and Guidelines for Amendments to the Survey and Manage, Protection Buffer, and other Mitigation Measures

Standards and Guidelines (EA Section 3.7, Fisheries and Aquatic Fauna; Section 3.9, Wildlife; and Section 3.10, Botany), including all survey protocols.

This project complies with the court's survey and management direction in Northwest Ecosystem Alliance v. Rey and is consistent with the survey requirements in the 2001 Record of Decision and Standards and Guidelines for Amendments to the Survey and Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines (USDA and BLM). As such, I find that this decision is consistent with the 2001 Survey and Manage ROD.

Surveys for botanical and fungal survey and manage species were conducted according to applicable survey and manage protocols for survey and manage Category A and C species, including "equivalent effort" surveys for survey and manage Category B species (EA, Section 3.10.3). Fungi *Clavariadelphus ligula* populations are within the two Spotted Owl core habitat area that would not be treated under the Proposed Action. There is a short-term risk that residual trees in thinned areas around the buffer retention area might be susceptible to wind-throw and breakage into the retention buffer circles and knock down fungal host trees. In the long term the downed trees would add nutrients to the soil and provide decomposing material for spore dispersal.

As such, I find that this decision is consistent with the 2001 Survey and Manage ROD, including all required survey protocols.

I find that the Proposed Action is consistent with the Aquatic Conservation Strategy (ACS). This project would maintain or restore all nine ACS objectives as summarized in EA, Section 3.8, through the projects design and the implementation of the PDC (EA, Section 2.3). The proposed project would treat vegetation in Riparian Reserves to restore them to a more natural vegetation state. This would result in more natural function of the riparian area. Benefits from implementation of the Proposed Action would be noticeable at the site scale and possibly the 7th field sub-watershed scale and include restoration of large woody debris and some adjacent stream channel width to depth ratios (EA, Section 3.8)

I have also considered the existing condition of riparian reserves, including the important physical and biological components of the fifth-field watersheds and the effects to riparian resources. I find that the Phase I Proposed Action is consistent with riparian reserve standards and guidelines, and would contribute to maintaining or restoring the fifth-field watersheds over the long-term (EA, Section 3.6.3). Finally, I considered the relevant information from the East Fork Hood River Watershed Analysis (1996). This project has adopted the concepts for riparian reserve delineation described in the watershed analysis. The site-potential tree height in this project area is 130-feet.

By considering the prevention of invasive plant introduction, establishment and spread of invasive plants (EA, Section 3.11), the planning process is consistent with the Pacific Northwest Invasive Plant Program Preventing and Managing Invasive Plants Record of Decision issued in 2005 and the Site-Specific Invasive Plant Treatments for Mt. Hood National Forest and Columbia Gorge Scenic Area in Oregon Record of Decision issued in 2008. Project Design Criteria/Mitigation Measures are included to prevent the spread and establishment of invasive plants (Appendix 2).

Further, I find that the Proposed Action is consistent with the Forest Plan and Regional direction on management indicator species and sensitive species.

I have considered the impacts to management indicator species (MIS) as disclosed in the EA (EA Section 3.7, Fisheries and Aquatic Fauna and Section 3.9, Wildlife Section). Aquatic MIS within the project area include bull trout, steelhead trout, coho salmon, resident trout and Chinook salmon. Wildlife Survey and Manage Species within the project area include the Larch Mountain Salamander, Dalles Sideband, mule deer and elk, pileated woodpecker, and American marten. I find that the Proposed Action is consistent with the standards and guidelines pertaining to these species, and that based on the limited effects to any, the Modified Phase I Proposed Action does not contribute towards a negative trend in viability on the Forest.

I have considered the impacts Regional Forester's Sensitive Species list for aquatic, wildlife and botanical species as disclosed in the EA (EA Section 3.7, Fisheries and Aquatic Fauna; Section 3.9, Wildlife; and Section 3.10, Botany). All resource areas used the Region 6 Regional Forester's 2011 Sensitive Species list for this analysis. The Proposed Action would have no significant adverse effects to sensitive species. The project would not jeopardize the continued existence of any listed species nor would it cause a trend to federal listing or loss of viability for these species.

Barren Juga, Scott's Apatanian caddisfly, Basalt juga, and Columbia Dusksnail are the aquatic sensitive species present in the project area. Due to the small amount of habitat present within the project area, the Modified Phase I Proposed Action will have no impact to the population or species.

The Peregrine Falcon, harlequin duck, White headed woodpecker, Fringed Myotis, western bumblebee (*Bombus occidentalis*) and Johnson's Hairstreak are the wildlife sensitive species present in the project area. For Peregrine Falcons, the temporary impacts from helicopter use for harvest activities, distribution of food resources/ prey availability may impact individuals or habitat, but would not likely contribute to a trend towards federal listing or cause a loss of viability to the population or species. The temporary impacts to harlequin duck prey species and disturbance to nesting sites from project activities may impact individuals, but is not likely to impact populations, nor contribute to a potential loss of viability of this species. These impacts would be temporary and habitat would be improved in the long-term. Phase I would have a positive direct effect to habitat for white headed woodpeckers, as there would be an increase in nesting habitat, there would continue to be areas with higher closed canopies for foraging opportunities and the stands would become more fire resistant, helping to keep habitat present into the future. Because snags are not proposed for removal the impact to nesting is thought to be very limited. For fringed myotis, this project is likely to have a beneficial effect by creating openings and decreasing canopy closure in portions of the project area increasing foraging opportunities in the short term. Since fringed myotis are correlated with less canopy cover and roost sites would not be impacted at a measureable scale. The temporary reduction in flowering shrubs and nesting sites for the western bumblebee may impact individuals, but is not likely to impact populations, nor contribute to a potential loss of viability of this species, and an increase in flowering shrubs and herbaceous species is expected to increase with the proposed action, being a positive impact on bumblebees. For Johnson's hairstreak, short term impacts to flowering plants and a reduction of mistletoe would impact Johnson's hairstreak negatively. However with the proposed action an increase in flowering plants for forage opportunities is expected and a continued presence of mistletoe would occur.

There are no known sites for botanical sensitive species within the project area and no sites/habitat that require management. As such, this decision would have no impact to any botanical sensitive species.

I have considered the analysis in EA, Section 3.5, Water Quality and find that this decision is consistent with the Clean Water Act. Vegetation removal near water bodies has the potential of increasing solar radiation to surface water which in turn may increase water temperature. To maintain sufficient stream shading to meet the Clean Water Act while providing the opportunity to treat Riparian Reserve vegetation to improve riparian conditions, the primary shade zone would remain untreated for perennial streams. The size of this zone is dependent on the current height of the trees and the hill slope as defined in Table 3-25 (EA, Table 49). Both perennial and intermittent streams as well as wetlands and ponds have no-treatment protection buffers as defined in PDCs that would help ensure Clean Water Act requirements as met.

The Magnuson-Stevens Fishery Conservation and Management Act (MSA), as amended by the Sustainable Fisheries Act of 1996 (Public Law 104-267), established procedures designed to identify, conserve, and enhance essential fish habitat (EFH) for those species regulated under a Federal fisheries management plan. Pacific salmon (Chinook, pink, and coho) EFH was designated in 1999, and includes all water bodies occupied or historically accessible by the these species within identified fourth-field

hydrologic units in Oregon, Washington, Idaho and California [Federal Register Vol 23(200) October 15, 2008]. Pink salmon are not native to the Hood River watershed, thus within the action area, EFH is coincident with designated Chinook salmon and proposed coho salmon critical habitat. A Biological Assessment has been completed for this project and a Letter of Concurrence was received on April 4, 2017 with a correction received on May 15, 2017. NMFS analyzed the combined impacts of all of the project elements of the proposed action on LCR Chinook salmon, LCR coho salmon, and LCR steelhead, and designated critical habitat and concludes that all effects of the proposed action are discountable or insignificant and therefore are NLAA LCR Chinook salmon, LCR coho salmon, and LCR steelhead, and their designated critical habitats.

The Forest operates under a Programmatic Agreement (PA) with the Oregon State Historic Preservation Office (SHPO) and the Advisory Council on Historic Preservation (ACHP). Heritage resource inventories were conducted in compliance with the 2004 PA during the project planning stage (FW-602 and FW- 606), the field survey results were fully documented (FS-608), and the potential effects to heritage resources from the proposed projects were assessed (FW-609, FW-610). Heritage resources potentially affected by project activities were evaluated as ineligible for inclusion on the NRHP (FW-612). Based on the proposed protective measures, the project meets the criteria in the Programmatic Agreement for “No Historic Properties Affected” determination (Stipulation III (B) 5). As such, I find that this decision is consistent with the National Historic Presentation Action and all consultation requirements have been met (EA, Section 4.13.4).

All management activities shall comply with all applicable air quality laws and regulations, including the Clean Air Act and the Oregon State Implementation Plan. Also, the Forest Service is operating under the Oregon Administrative Rule 629-0048-0001. The Forest Service would comply with the requirements of the Oregon Smoke Management Plan, which is administered by the Oregon Department of Forestry (EA, Section 3.3.3).

PRE-DECISIONAL ADMINISTRATIVE REVIEW

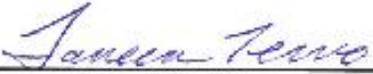
This project was subject to pre-decisional administrative review (also called the “objection process”) pursuant to 36 CFR 218, Subpart C (provision specific to proposed projects authorized under the HFRA), in which two objections were filed. One objection was filed jointly by Bark and Oregon Wild; and the other objection was filed by the American Forest Resources Council (AFRC). The Objection Reviewing Officer and I met with representatives from Bark, Oregon Wild, and AFRC on October 23, 2017. Based on our discussions, I agreed to remove the plantation unit in Block 9, which is approximately 23 acres, from this decision. I also agreed to remove all temporary roads located below the unnamed stream, which is approximately two miles, in Block 10 from this decision. Thirdly, I agreed to map and manage a potentially wet area in Block 11 as a Riparian Reserve, if confirmed by a Forest Service Hydrologist. Based on these agreements made with the objectors, they withdrew their objections to this project. Bark and Oregon Wild withdrew their objection on October 27, 2017; and AFRC withdrew their objection on October 30, 2017. The Objection Reviewing Officer, which was the Mt. Hood Forest Supervisor, issued a letter on October 30, 2017 outlining the resolution agreement and setting aside the objections without further review, in accordance with the regulation at 36 CFR 218.10(a)(6).

IMPLEMENTATION DATE

Implementation of this decision may occur immediately following the date of final decision.

CONTACT

For additional information concerning this decision, contact Whitney Olsker, Hood River Ranger District, 6780 Highway 35, Mount Hood/Parkdale, OR 97041; phone (541) 467-5155; Email: wolsker@fs.fed.us. Additional information also is available on the project website at: <http://www.fs.usda.gov/goto/mthood/projects>.



JANEEN TERVO
Hood River District Ranger



Date

USDA Non-Discrimination Policy Statement

DR 4300.003 USDA Equal Opportunity Public Notification Policy (June 2, 2015)

In accordance with Federal civil rights law and U.S. Department of Agriculture (USDA) civil rights regulations and policies, the USDA, its Agencies, offices, and employees, and institutions participating in or administering USDA programs are prohibited from discriminating based on race, color, national origin, religion, sex, gender identity (including gender expression), sexual orientation, disability, age, marital status, family/parental status, income derived from a public assistance program, political beliefs, or reprisal or retaliation for prior civil rights activity, in any program or activity conducted or funded by USDA (not all bases apply to all programs). Remedies and complaint filing deadlines vary by program or incident.

Persons with disabilities who require alternative means of communication for program information (e.g., Braille, large print, audiotope, American Sign Language, etc.) should contact the responsible Agency or USDA's TARGET Center at (202) 720-2600 (voice and TTY) or contact USDA through the Federal Relay Service at (800) 877-8339. Additionally, program information may be made available in languages other than English.

To file a program discrimination complaint, complete the USDA Program Discrimination Complaint Form, AD-3027, found online at http://www.ascr.usda.gov/complaint_filing_cust.html and at any USDA office or write a letter addressed to USDA and provide in the letter all of the information requested in the form. To request a copy of the complaint form, call (866) 632-9992. Submit your completed form or letter to USDA by: (1) mail: U.S. Department of Agriculture, Office of the Assistant Secretary for Civil Rights, 1400 Independence Avenue, SW, Washington, D.C. 20250-9410; (2) fax: (202) 690-7442; or (3) email: program.intake@usda.gov.

USDA is an equal opportunity provider, employer and lender. USDA and provide in the letter all of the information requested in the form. To request a copy of the complaint form, call (866) 632-9992. Submit your completed form or letter to USDA by: (1) mail: U.S. Department of Agriculture, Office of the Assistant Secretary for Civil Rights, 1400 Independence Avenue, SW, Washington, D.C. 20250-9410; (2) fax: (202) 690-7442; or (3) email: program.intake@usda.gov.

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Table 4. Block Information for the Modified Phase I Decision

Block	Thinning Treatment Type	Acres	Age (yr)	Tree Species	Current Canopy Cover (%)	Target Canopy Cover (%)	Logging System	Temporary Roads
8	Recently Unmanaged Stand	16	93	GF, DF, WRC, WH	70	40	Ground	Yes
9	Plantation, Recently Unmanaged Stand	51	58	GF	60	30	Ground, Skyline	Yes
10	Recently Unmanaged Stand	211	88	GF, DF	60	30	Ground, Skyline, Helicopter	Yes
11	Recently Unmanaged Stand	146	107	GF, DF, WWC	60	30	Ground, Skyline, Helicopter	Yes
12	Recently Unmanaged Stand	49	131	GF	55	40	Helicopter	No
13	Recently Unmanaged Stand	4	106	GF, VM, Chinquapin, DF	70	40	Helicopter	No
14	Recently Unmanaged Stand	85	159	GF, DF	50	50	Helicopter	No
15	Recently Unmanaged Stand	23	105	GF, VM, RA, DF	75	40	Ground, Helicopter	No
16	Sapling, Recently Unmanaged Stand	9	179	GF, DF	65	50	Ground,	Yes
17	Plantation, Sapling	407	65	GF, DF	60	40	Ground, Skyline, Helicopter	Yes
18	Recently Unmanaged Stand	54	177	GF, DF	70	40	Ground, Skyline	Yes

Polallie Cooper Hazardous Fuels Reduction Project – Final Decision Notice – Appendix 1

Block	Thinning Treatment Type	Acres	Age (yr)	Tree Species	Current Canopy Cover (%)	Target Canopy Cover (%)	Logging System	Temporary Roads
19	Recently Unmanaged Stand	106	110	GF,DF	70	40	Ground, Skyline, Helicopter	Yes

Abbreviations used in the table are: DF = Douglas-fir; GF = grand fir; LP = lodgepole pine; NF = noble fir; WH = western hemlock; MH = mountain hemlock; PP = Ponderosa Pine; WRC = Western Red Cedar; VM = Vine Maple; RA = Red Alder

APPENDIX 2: Project Design Criteria

The National Environmental Policy Act defines “mitigation” as avoiding, minimizing, rectifying, reducing, eliminating or compensating project impacts. The following project design criteria and mitigation measures are an integral part of this project and are required to be implemented as part of the Proposed Action.

2.3.1 Vegetation Management

V-1. Gap size and distribution (i.e. location and number) would vary depending on stand specific conditions and treatment types.

- In the western and central portion of the planning area (Blocks 1-11 and 21) no gaps would be placed in young plantations (<20 years). Plantations over 20 years (within Blocks 1-3,6,7 and 9) gap sizes would not exceed 5 acres and would maintain a minimum of 30% canopy cover in resistant species when available. Gaps larger than 2 acres within commercial plantations should be focused in dry plant communities and/or around forest health concerns. Gaps in recently unmanaged stands (Blocks 8, 10, and 11) should be no more than 2 acres.
- In the eastern portion of the planning area (Blocks 12-19) gaps in commercial plantations (Block 17) would not exceed 5 acres and would maintain a minimum of 30% canopy cover in resistant species when available. In recently unmanaged stands (Blocks 12-16, 18, and 19) gaps should be no more than 2 acres.

V-2. Within Riparian Reserves for perennial streams, gaps would only be allowed within 1 site potential tree (130 feet) if the stream is glacially or spring fed or the gap is located on the north side of the stream. If these conditions are met, gaps could be created, but they would be located outside protection buffers outlined in the Project Design Criteria. If gaps are created along intermittent streams they would be outside the protection buffer. See (PDC A-2).

V-3. If a gap is placed in a Riparian Reserve directly adjacent to a stream designated as listed fish habitat (Dog River, Polallie Creek, or the East Fork Hood River) the gap would be located one site potential tree height or further from the LFH stream regardless of the protection buffer width. This pertains to the above streams in blocks 9, 10, 11, 12, 13, 14, 15, 17, 18, and 19.

V-4. No gaps would be located in Riparian Reserves within skyline blocks.

V-5. Tree planting would occur in gaps larger than 2 acres and interplanting would occur only where canopy cover is open enough to support the establishment of shade intolerant and/or fire resistant species (ponderosa pine, western larch, western white pine).

V-6. Openings would be created in root disease pockets. Openings would be reforested in accordance with site conditions

2.3.2 Fuels

F-1. Purchaser should pile all sale generated and previously created slash that has been disturbed by harvesting activities where the down woody tons per acre standards and guidelines are exceeded. Refer to W-5.

F-2. Slash piles should have a sound base to prevent toppling over and should be wider than they are tall. Pile branches with their butt-ends toward the outside of the pile, and overlap them so as to form a series

of dense layers piled upon each other. Use a mixture of sizes and fuel throughout the pile. Piles should be kept compact and free of soil and noncombustible material, with no long extensions. Do not construct piles on stumps or on sections of large down logs.

F-3. Pile size and location should be such to minimize damage to residual trees. Piles should be located at least 20-feet inside the block boundary. Piles should not be placed on or in the following areas: pavement, road surface, ditch lines, the bottom of ephemeral channels, or within perennial or intermittent stream protection buffers.

F-4. Low severity burns¹ should constitute the dominant type of controlled burn within Riparian Reserves, resulting in a mosaic pattern of burned and unburned landscape.

F-5. Moderate severity burns² are permitted in no more than 20% of Riparian Reserves to invigorate desirable deciduous species.

F-6. Ignition could occur within the Riparian Reserve, but outside of the protection buffer.

F-7. Burning activities excluded in Riparian Reserves are as follows: mechanical fire line construction (e.g. dozer, tractor, etc.) and use of chemical fire retardant.

F-8. Within Riparian Reserves; wet line or black line would be used to control prescribed fire perimeter.

F-9. Where handline is constructed, implement BMP's to reduce erosion and sedimentation risks, including constructing waterbars on all fire lines during initial fire line construction where slopes are greater than 20%.

2.3.3 Roads

R-1. All signing requirements on roads that are open for public use within the Mt. Hood National Forest would meet applicable standards as set forth by the Manual of Uniform Traffic Control Devices (MUTCD). Some roads accessing State and County highways would require additional signing to warn traffic of trucks entering onto or across the highway.

R-2. Temporary roads and National Forest System roads which are designated for 'project use only' would be closed to public use. The purchaser should sign the entrance to such roads with "Logging Use Only" signs and make every reasonable effort to warn the public of the hazard and to prevent any unauthorized use of the road.

R-3. The use of steel-tracked equipment on asphalt or bituminous surfaced roads is strongly discouraged. If a suitable site for the loading and unloading of equipment and materials is not available, then use of a paved surface may be permitted provided that the purchaser uses approved matting materials (such as wood chip or crushed rock) to protect the road surface. Purchaser is responsible for restoring roads to existing condition.

R-4. Temporary roads and landings located on or intersecting National Forest System roads that are asphalt or bituminous surfaced would have 3-inch minus or finer dense graded aggregate placed at the approach to prevent surface damage. The purchaser should purchase the material from an approved commercial source and place the material so that the approach flares are wide enough to accommodate the off-tracking of vehicles entering onto or leaving the site.

¹ Low severity burn is defined as: "Small diameter woody debris is consumed; some small twigs may remain. Leaf litter may be charred or consumed, and the surface of the duff may be charred. Original forms of surface materials, such as needle litter of lichens may be visible; essentially no soil heating occurs."

² Moderate severity burn is defined as: "Foliage, twigs, and the litter layer are consumed. The duff layer, rotten wood, and larger diameter woody debris is partially consumed; logs may be deeply charred; shallow ash layer and burned roots and rhizomes are present. Some heating of mineral soil may occur if the soil organic layer was thin."

R-5. Temporary roads and landings would not obstruct ditch lines. Temporary roads and landings that obstruct ditch lines or drainage ways should be improved by the purchaser, prior to commencing operations, with temporary culverts, french drains, drivable dips, or measures that provide effective drainage and prevent erosion.

R-6. On aggregate surfaced roads, mineral soil contamination degrades and reduces the load bearing capacity of the existing road surface. All appropriate measures would be taken to prevent or reduce such contamination. If contamination occurs, the purchaser should repair contaminated areas with specified aggregate surfacing.

R-7. Temporary roads and landings on temporary roads would be decompacted to a depth of 24” in the Crystal Springs Watershed Special Resources Management Unit (CSWSRMU) prior to the block being released. Outside of the CSWSRMU temporary roads and landings on temporary roads would be scarified before the block is release. Culverts would be removed and cross-drain ditches or water bars would be installed as needed. Disturbed ground should be seeded and mulched and available logging slash, logs, or root wads should be placed across the road or landing surface. Post-harvest motorized access would be prevented through the construction of a berm, placement of large boulders, or other approved techniques.

R-8. Pit run rock from an approved source may be used when necessary to reduce erosion risk, puddling, rutting, and soil displacement on temporary roads and landings. To provide an efficient substrate for vegetative growth and water infiltration, rock would be removed or incorporated into the soil by decompacting to a depth of 24” (inside the CSWSRMU), or scarifying the roadbed following harvest activities (outside the CSWSRMU).

R-9. Unsuitable excavation resulting from ditch cleaning and other operations would be disposed of only at Forest Service approved sites outside riparian protection buffers (PDC A-2 and Table 2-7). Material disposed of should be spread evenly over an appropriate area in non-conical shaped piles with a maximum layer thickness of 3 feet. All disposals should be seeded and mulched at the completion of operations.

R-10. Stockpiles of aggregate intended for use on the project would be staged only at Forest Service approved sites. Materials should be placed in non-conical shaped piles with a maximum layer thickness of 3-feet. Stockpiles should be covered with weighted plastic sheeting when inclement weather is expected to protect it from precipitation and to prevent water quality degradation from runoff.

R-11. Existing vegetation in ditch lines hydrologically connected to streams (as defined in NWFP⁴) must not be removed unless a biodegradable sediment control feature such as check dams constructed of bio-bags, straw bales, or other materials are installed. Sediment control features would be maintained until the sale is released and left in place.

R-12. Scheduled soil disturbing road maintenance or reconstruction should occur during the Normal Operating Season (generally June 1 – October 31), unless a waiver is obtained.

R-13. Follow the appropriate Oregon Department of Fish and Wildlife (ODFW) guidelines for timing of in-water work (in this watershed the in-water work window is July 15 – August 31¹. Exceptions to the ODFW in-water work windows must be requested by the Forest or its contractors, and subsequently approved by ODFW, National Marine Fisheries Service (NMFS), U.S. Army Corps of Engineers, and Oregon Division of State Lands.

R-14. New temporary roads and landings should be located outside of Riparian Reserves. Use of existing facilities within riparian reserves may be allowed if erosion potential and sedimentation concerns could be sufficiently mitigated.

R-15. To ensure that temporary roads are constructed in a manner that provides for user safety, minimizes landform disturbance, and protects resource values such as water quality, soil stability, and visual quality of the Forest, Forest Service Roads Engineering should be consulted whenever:

- a. Temporary roads would be constructed in areas with an existing cross-slope greater than 40%,
- b. Temporary roads would have a road grade above 15% for any distance greater than 2,000 feet, or
- c. Temporary roads would have a road grade above 18% for any distance greater than 600 feet.

2.3.4 Log and Rock Hauling

L-1. Log and rock haul outside of Normal Operating Season (June 1 – October 31) would not occur on the following roads or road segments: 3510620 and 3512012.

L-2. Log haul, rock haul and equipment transportation may be allowed outside the Normal Operating Season (June 1 – October 31) on aggregate and native surface roads not listed in L-1 if approved by the appropriate specialist(s) and the following criteria are met:

- a. Haul routes must be inspected, or have responsible official approval weekly, or more frequently if weather conditions warrant.
- b. Sediment traps would be installed where there are potential sediment inputs to streams. Sediment traps would be inspected weekly by the timber sale administrator (or qualified specialist) during the wet season and entrained soil would be removed when the traps have filled to 3/4 capacity. Dispose of these materials in a stable site not hydrologically connected to any stream.
- c. Precipitation amounts are similar to those found during the normal operating season. This is defined as the following: The daily precipitation level remains below the average daily maximum precipitation for the June through October period at the precipitation gage nearest the planning area; AND the two-week cumulative total precipitation remains less than the average maximum two-week precipitation levels during the June through October period as measured at the nearest precipitation gage AND no visible sedimentation is occurring in road ditches and culverts caused by the haul as determined by a hydrologist/soil scientist prior to operations. Additionally, all haul would stop with 24 hours of continuous rain regardless of amounts.
- d. Proposed hauling on established snowmobile routes and/or weekend operations are approved beforehand by the recreation specialist.

L-3. Log haul and heavy vehicle transport on NFS roads would be prohibited when the temperature of the road surface, as measured at the lowest elevation along the haul route on National Forest System lands, is above 28 degrees Fahrenheit and when the temperature as measured at the highest elevation on the active haul route is between 28 and 38 degrees Fahrenheit or at any time when the designated Timber Sale Administrator determines that freeze-thaw conditions along the haul route exist

L-4. Within the normal operating season, log and rock haul on system and temporary roads would be prohibited at any time there is 1.5 inches of precipitation within any given 24-hour period as measured at the lowest elevation along the haul route. To measure precipitation, the purchaser may install a temporary rain gauge on National Forest System land near or adjacent to the lowest elevation along the haul route as agreed upon; otherwise, precipitation would be measured according to the Log Creek RAWS station (LGFO3). Data for the Log Creek RAWS station can be found at: http://raws.wrh.noaa.gov/cgi-bin/roman/raws_flat.cgi?stn=LGFO3

2.3.5 Aquatic Resources

A-1. No ground based mechanized equipment, including but not limited to tractors or skidders may operate within 100-feet of streams, seeps, springs or wetlands while conducting logging and fuel treatment operations.

A-2. Any incidental trees felled within designated protection buffers would be left on site as additional stream channel woody material. Protection buffers for perennial streams and wetlands would be a minimum of 60-feet and a minimum of 30-feet for intermittent streams, except where wider as outlined in Table 63 of the EA. Buffers are measured from the edge of the bankfull channel on both sides of the stream (or water's edge in the case of a pond or wetland). Buffers would be expanded to include slope breaks where appropriate. Trees should be felled towards streams.

A-3. If a tree located outside a protection buffer lands wholly or partially within the protection buffer when felled, none of the tree located within the protection buffer would be removed.

A-4. Ground based mechanized equipment, such as skidders, dozers, and feller-bunchers, operation would not be allowed outside the Normal Operating Season (June 1 – October 31) within Riparian Reserves unless approved through the existing waiver process by a soils, hydrology, and/or fisheries specialist.

A-5. Locate new landings outside of Riparian Reserves. Use of existing landing locations within Riparian Reserves may be allowed if erosion potential and sedimentation concerns can be sufficiently mitigated as determined by a qualified Soil Scientist or Hydrologist. Existing landings within one site potential tree height from streams, seeps, springs or wetlands would not be used unless the slope between the landing and surface water is thirty percent or less and there is an intact vegetated buffer between the landing and surface water.

A-6. Refuel mechanized equipment at least 150-feet from water bodies. Parking of mechanized equipment overnight or for longer periods of time would be at least 150 feet from water bodies or as far as possible from the water body where local site conditions do not allow a 150-foot setback. Absorbent pads would be required under all stationary equipment and fuel storage containers. A Spill Prevention Control and Countermeasures Plan would be prepared by the contractor as required under EPA requirements (40 CFR 112).

A-7. Skyline yarding should allow at least one end log suspension at all times.

A-8. Skyline yarding corridors should not exceed 15-feet in width and should be spaced at least 100-feet apart on average.

A-9. Use erosion control measures (e.g., silt fence, sediment traps) where road maintenance or reconstruction may result in delivery of sediment to adjacent surface water.

A-10. Install suitable stormwater and erosion control measures (e.g., ditching, seeding, mulching) to stabilize disturbed areas and waterways on incomplete projects prior to seasonal shutdown of operations, or when severe storm or cumulative precipitation events that could result in sediment mobilization to streams are expected.

A-11. The timber sale administrator or qualified specialist would monitor disturbed areas, as needed, to verify that erosion and stormwater controls are implemented and functioning as designed and are suitably maintained.

A-12. No water would be withdrawn from any occupied LFH stream (East Fork Hood River and Dog River) except in an emergency (e.g. wildfire) situation. Limit water withdrawals for road maintenance or other purposes in unoccupied LFH (Polallie Creek) and within 1,500 feet of occupied or unoccupied LFH to 10 percent or less of stream flow at the point of withdrawal (visually estimated). In non - LFH streams greater than 1,500 feet from LFH limit withdrawal by 50 percent or less of the stream flow (visually estimated). Regardless of water withdrawal location, use of screen material with either of the following maximum openings is required: 1.75 mm opening for woven wire or 3/32 inch opening for perforated plate.

A-13. All ground based mechanized equipment would carry a hazardous material recovery kit.

PDCs within the Crystal Springs Zone of Contribution

A-14. Porta-potties or suitable toilet facilities would be provided on-site prior to any sale layout, construction, or harvest activity. These facilities would not be within 500 feet of any stream, spring, or seepage; secured from weather damage; and be maintained at necessary intervals. Special circumstances would be handled on a case by case basis.

A-15. Personal porta-potties are acceptable for use by personnel if such blocks are maintained daily and secured properly.

A-16. Personnel are to be instructed that the sanitary facilities are to be used and that such facilities must move with the job activity.

A-17. Disposal of composted human waste is prohibited inside the ZOC area.

A-18. Toilet facilities would be located in sites of activity concentration such as landings. The portable toilets would be located on a site where tipping over cannot occur.

A-19. No fuel would be stored within 1,000 feet of streams.

2.3.6 Soils

S-1. All skid trails would be rehabilitated immediately after harvest activities are completed. If those treatments are anticipated to be delayed beyond the current field season, then temporary effective closure of temporary roads and skid trails would occur to prevent unauthorized use.

S-2. Ground-based mechanized equipment used to harvest timber should not be used on slopes greater than 30 percent to avoid detrimental soil and/or watershed impacts. Ground based mechanized equipment used for fuel treatment would not operate on slopes greater than 40 percent unless approved beforehand by the soil scientist.

S-3. If a proposal to implement winter logging or outside the normal operating season is presented, the following should be considered by the line officer if the ground is not frozen hard enough and/or insufficient snow depth to support the weight and movement of machinery in moist to wet soil conditions:

- a. The proposal should be considered on a block-by-block basis using soil types in the area since some soils may be more prone to detrimental damage than others
- b. Because the margin of difference between not detrimental and detrimental soil damage can be so slim under moist to wet soil conditions, monitoring of the logging activity may need to occur daily, or more, as agreed to by sale administration and soil scientist
- c. Equipment normally expected to traverse the forest, such as feller bunchers, track mounted shears, etc., should be restricted to skid trails once soil moistures are such that even one or two trips are causing detrimental soil damage out in the block (i.e. not on landings or skid trails)
- d. Due to higher PSI's than track mounted equipment, no rubber tired skidders should be used even on skid trails once soils become fully saturated (approach their liquid limit)

2.3.7 Wildlife

W-1. Except for hauling and the removal of hazard trees to protect public safety, no activities would take place within the disruption distance of a known spotted owl activity center during the March 1 to July 15 critical nesting period.

a. The use of chainsaws and heavy equipment would not take place between March 1 and July 15 in portions of Blocks 1, 5, 10, 12, 13, 14, 15, 16, 17, and 19.

W-2. No activities would take place in B10 Deer/Elk Winter Range between December 1 and April 1. A portion of the Forest Service Road 44-620 & 17-680 (<1/4 mile) is within B10. A seasonal restriction for hauling would be in place for this portion of the road.

W-3. All snags larger than 12 inches would be retained where safety permits. If snags must be cut for safety reasons they would be left on site.

W-4. Certain live trees would also be selected as leave trees that have the “elements of wood decay” as described in the DecAID advisor. This may include trees with features such as dead tops, broken tops and heart rot.

W-5. An average of 6 logs per acre in decomposition classes 1, 2 and 3 should be retained in northern spotted owl suitable habitat. Logs should be relatively solid, retention of additional hollow and substantially fractured logs should be encouraged, tops should generally not be included. Logs should be at least 20 inches in diameter at the small end and have a volume of 40 cubic feet. Prior to harvest, contract administrators would approve skid trail and skyline locations in areas that would avoid disturbing key concentrations of down logs or large individual down logs where possible.

W-6. Known Northern spotted owl core areas would be protected through the implementation of seasonal operating restrictions (March 1 to July 15) for blocks 1, 2, 3, 5, 6, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, and 19. In the event that new core area(s) is/are located during the period of the contract(s) seasonal operating restrictions would be implemented in the area affected.

W-7. No burning may take place within 1/4-mile of spotted owl core areas between March 1 and July 15.

W-8. Survey and Manage species needing protection would be designated on-the-ground prior to ground disturbing activities occurring.

W-9. No heavy helicopter operations (Type 1) may take place within 1/4-mile of spotted owl nest patch between March 1 and Sept 30. Small helicopters would be subject to the same distance restriction between March 1 and July 15.

W-10. Continuous logging slash would be less than 24 inches deep to allow for deer and elk movement.

W-11. A no cut buffer of 50 feet around talus would be implemented to protect wood recruitment and stability of habitat for Survey and Manage Species.

2.3.8 Invasive Species

I-1. There are five invasive plant populations in the planning area that are approved for treatment under the 2008 Environmental Impact Statement for Site Specific Invasive Plant Treatments for Mt. Hood National Forest: Treatment ID #66-008 (Highway 35), 66-013 and 66-041 (road 3512-620 to block 8), 66-018 (road 44 to 4410 junction), and 66-043 (quarry at junction of road 3511-620, previously Forest Service land). The Forest Service would treat the areas or coordinate treatment with county/state weed departments prior to project activities or sale planning.

I-2. The quarry at the junction of roads 3511 and 3511-620 would be inspected by the District botanist or invasive plant program manager prior to project activity and sale planning. If invasive plants are found The Forest Service would treat the area or coordinate treatment with county/state weed departments prior to project activities or sale planning. [2005 Invasives ROD SG-7 applies]

I-3. All project activities (including brushing and ditch cleaning along access roads) in blocks 8, 17, and 18 should be scheduled last if possible to avoid spreading weeds to uninfected areas. Equipment that has operated blocks 8, 17, and 18, and along access roads to the blocks, should be washed prior to moving off

the Hood River District to avoid spreading invasive plants elsewhere on or off Forest. The Forest Service would coordinate with Hood River County (HRC) to establish an equipment washing station at the HRC maintenance facility in Parkdale.

I-4. Schedule timing of brushing and ditch cleaning along roads in the treatment areas in consultation with the District botanist or invasive plant program manager to ensure activities occur before (if possible) invasive plants are in bloom, and identify disposal areas for weed infested ditch material. [2005 Invasives ROD SG-8 applies].

I-5. The District botanist or invasive plant program manager would monitor the treatment areas. Monitoring of treatment areas, haul routes, associated landings and equipment staging areas would continue for at least 3 years after project activity; follow-up treatment would be conducted if necessary [BMP Practice 18 applies].

I-6. Use only approved weed-free sources of gravel, fill, sand, rock, or re-usable/recovered rock material that has been inspected by the District botanist or invasive plant program manager. A list of rock/gravel sources that have been certified weed-free would be issued to contractors; if a contractor would like to use a rock/gravel source that is not on the list it would require inspection. [2005 Invasive ROD SG-7 applies].

I-7: *Arabis sparsiflora var. atrorubens* (sickle-pod rock cress) was not found in the planning area during surveys but does grow around the outer edges of Shellrock Quarry which might be used for rock and gravel or staging equipment. If it is determined at some point that use of the quarry is needed, consult with the Hood River or Barlow Ranger District botanists to assist with flagging a buffer to prevent impacting the habitat.

2.3.9 Heritage Resource Sites

H-1. All designated cultural resource sites requiring protection would have a 100-foot buffer zone where heavy machinery and timber harvest would be excluded. Prescribed burning would also be excluded from the buffer zone with hand-constructed fire control line. Treatment of vegetation by hand could still occur as necessary.

H-2. Culturally-modified trees would be flagged individually and avoided. Harvest trees would be felled directionally away from flagged trees.

H-3. Historic ditches would be flagged with 50-foot buffer zone where heavy machinery and timber harvest would be excluded. Treatment of vegetation by hand could still occur as necessary. Ditch crossings would occur only where designated on previous breaches.

2.3.10 Visuals

V-1. Landings and skyline corridors would use topographic and vegetation screening to meet Retention standards from Highway 35 and recreation sites along highway 35 once harvest activities are complete.

V-2. Piles would use topographic and vegetation screening to meet Retention standards within ½ mile of Highway 35 and recreation sites along Highway 35.

V-3. Piles would be visually subordinate along Forest Road 3512 and within trail shade buffers. They would be burned within 1 year of contract termination.

V-4. Tree stumps would be maintained at heights of 6 inches or less within Foreground (up to ½ mile) and be angled away from the roadway to meet Retention standards within ½ mile of Highway 35 or Forest Road 3512.

V-5. Landings along the 3512 and within the foreground of Forest Road 3512 would be less than ¼ acre and would be rehabilitated once harvest activities are complete.

V-6. Temporary roads would be screened using topography and vegetation from viewer positions along Highway 35 and recreation sites along Highway 35. Temporary roads would be obscured from viewer positions along Forest Road 3512 within A11 and would not be visually dominant along the remainder Forest Road 3512.

V-7. All stumps would be maintained at 6 inches or less and angled away from the trails within 660 feet of trails within the planning area to meet Retention standards.

V-8. In foreground along scenic corridors (Highway 35 and Forest Road 3512 and trail corridors, leave trees would not be marked facing the roadway.

V-9. Boundary flagging would not be visible along Highway 35 when treatment is complete.

2.3.11 Recreation

RC-1. A 100 foot shade buffer would be retained on either side of all trails within the planning area. Inside the buffer all overstory and decomposition classes 1, 2 and 3 trees would be retained in order to maintain the current visual integrity and existing shade along the trail corridors. See W-5. There would be no ground-based yarding within the 100 foot buffer.

RC-2. No trailheads would be used as landings and any trailheads impacted from haul would be rehabilitated when treatment is complete.

RC-3. The temporary road currently accessing the CCC warming shelter would be utilized for haul and then reestablished to the previous use.

RC-4. No treatment activities would occur within the Cooper Spur Ski Area during winter operations.

RC-5. Coordinate with district recreation staff to place informational signs at trailheads and at trail junctions prior to initiation of timber harvest activities and underburning, jackpot burning and swamper burning activities. Signs would be posted at least a season prior to initiation of activities.

RC-6. Work with recreation specialist to develop public information materials and outreach plan using a combination of key entry/exit portals, visitor information boards and outreach via websites and other information sources.

RC-7. Involve a recreation specialist during treatment layout to determine mitigation measures to reduce disruptions to recreation use to the greatest extent possible. Determine best management practice for spatial and temporal layout of blocks to maintain trail corridors.

RC-8. Due to recreation concerns no treatment activities and haul take place on weekends and holidays.

RC-9. Water would be used to reduce dust levels when appropriate. This includes all trail corridors for trails intersecting with the project boundary and Forest Road 17.

RC-10. Landings and skyline corridors would not be visible from trails and trailheads within the planning area once harvest activities are complete. Temporary road crossings of system trails within Block 19 would be coordinated with the recreation specialist.

RC-11. In Block 19 crossing points would be at least 100 feet apart. Equipment would cross at right angles to the trail. Location of crossing points would be coordinated with district trails manager. (Block 19)

RC-12. Include trails as protected feature in sale map. All harvest activities and rehabilitation affecting the trail in Block 19 would be completed within one season.

APPENDIX 3: ACS Summary

1. Maintain The Distribution, Diversity And Complexity Of Watershed And Landscape-Scale Features:

95.7 percent of the Riparian Reserves in the 6th field sub-watersheds comprising this project would be left untreated so their current condition would be maintained. A specific prescription for vegetation treatments in Riparian Reserves has been developed for this project and this prescription is intended to maintain or enhance the development of a diverse, healthy riparian area while protecting it with a variety of project design criteria. The prescription includes a protection buffer adjacent to each perennial and intermittent stream that would maintain existing vegetative conditions adjacent to these features. No new road crossings or reconstruction of existing crossings in perennial or intermittent streams or wetlands are proposed.

2. Maintain Spatial And Temporal Connectivity Within And Between Watersheds:

95.7 percent of the Riparian Reserves in the 6th field sub-watersheds comprising the project would be left untreated so their current condition would be maintained. A specific prescription for vegetation treatments in Riparian Reserves has been developed for this project and this prescription is intended to maintain or enhance the development of a diverse, healthy riparian area while protecting it with a variety of project design criteria. The prescription includes a protection buffer adjacent to each perennial and intermittent stream that would maintain existing vegetative conditions adjacent to these features.

3. Maintain the Physical Integrity of the Aquatic System, Including Streambanks, Side channels (Refugia), And Channel Bottom Configurations:

This project would meet this objective through project design criteria aimed at reducing soil compaction and erosion, restricting near-stream ground disturbance and establishment of protection buffers next to perennial and intermittent streams which would maintain current levels of snags and wood input. A prescription for vegetation treatments in Riparian Reserves that is intended to maintain or enhance the development of a diverse, healthy riparian area and the lack of any new or reconstructed road crossings on perennial or intermittent streams would greatly reduce risks of sedimentation, increased peak flow, and resulting bank erosion and channel bed scour.

4. Maintain Water Quality Necessary To Support Healthy Ecosystems:

This project would meet this objective through project design criteria and inclusion of a specific prescription for vegetation treatments in Riparian Reserves that includes a protection buffer adjacent to each perennial and intermittent stream. This protection buffer includes the primary shade zone along perennial streams that would maintain stream temperature. The protection buffer would also trap any eroded material prior to reaching surface water, thus reducing or eliminating the potential for sediment delivery. The protection buffers in conjunction with project design criteria aimed at reducing erosion would maintain the sediment levels in the long-term. Additional PDC for the Crystal Springs DWPA including on-site toilet facilities and limits to fuel storage would reduce the risk of water quality degradation. These measures are discussed in detail in the Soil Productivity, Water Quality, and Fisheries sections in Chapter 3.

5. Maintain Sediment Regimes:

Project design criteria aimed at reducing soil compaction, erosion and sediment transport, restricting near stream ground disturbance and establishment of protection buffers next to perennial and intermittent streams would minimize sediment introduction in the short and long-term. Any sedimentation resulting

from road maintenance activities would be short term and most evident at the site scale. Overall sediment production from roads is expected to be reduced since most maintenance activities are aimed at correcting areas that have existing erosion problems.

6. Maintain In-Stream Flows That Are Closer To Natural Regimes:

As described in the watershed section of the EA, this project would maintain the Watershed Impact Area below the 35% Management Plan Standard and Guide which shouldn't result in any peak flow increase from this project. In addition, there would be no new road/stream crossings so there would not be any increase in the stream channel network by implementation of the Proposed Action.

7. Maintain The Timing, Variability, And Duration Of Floodplain Inundation:

This project would meet this objective through project design criteria such as establishment of protection buffers next to perennial and intermittent streams which would maintain floodplain and channel roughness and ultimately the timing, variability and duration of floodplain inundation. Maintaining the Watershed Impact Area below the 35% Management Plan Standard and Guide would protect the integrity of the floodplains while minimizing the potential for increased peak flows. In general, floodplains are limited in this area due to the steep nature of the landscape.

8. Maintain The Species Composition And Structural Diversity Of Plant Communities In Riparian Areas And Wetlands:

A specific prescription for vegetation treatments in Riparian Reserves has been developed for this project and the prescription is intended to maintain or enhance the development of a diverse, healthy riparian area while protecting it with a variety of project design criteria. Treatments within the Riparian Reserves are aimed at producing a more natural vegetative composition and density that has been lost through many decades of fire suppression.

9. Maintain And Restore Habitat To Support Well-Distributed Populations Of Native Plant And Riparian Dependent Species:

The project would meet this objective with project design criteria and vegetative treatments that are designed to simulate a more natural disturbance regime within the area.