

Decision Record
For Pre-commercial Thinning, Brush Removal and Fuels Treatments
As analyzed under the Anaktuvuk Thin Project Environmental Assessment
(EA# OR118-06-010)

United States Department of the Interior
Bureau of Land Management
Medford District, Glendale Resource Area

I. INTRODUCTION

This Decision Record documents the decision regarding the forest activities of brushing, pre-commercial thinning, removing biomass and pruning analyzed under the Anaktuvuk Thin Project Environmental Assessment (EA# OR118-06-010). The Anaktuvuk Thin Environmental Assessment (EA) is a transition project that is in compliance with the 1995 Resource Management Plan, as amended.

The Anaktuvuk Thin Planning Area (PA) is located near Anaktuvuk Saddle, approximately 18 miles west of the town of Glendale, Oregon. The legal description of the PA is Township (T) 32S, Range (R) 9W, Sections 8-9, 16-17, and 21 WM.

II. PUBLIC INVOLVEMENT

Notification of the proposed Anaktuvuk Thin Project was placed in the quarterly BLM Medford Messenger publication beginning in fall, 2005. Public scoping included mailing the Anaktuvuk Thin Scoping Report to individuals and organizations expressing interest in Glendale Resource Area projects. Public comment for the Scoping Report was available from April 27, 2007 to May 31, 2007. The BLM received three public response letters that were fully responded to in Appendix 3 of the Anaktuvuk Thin EA. Comments were considered by the interdisciplinary team in the development of the alternatives.

The EA and Finding of No Significant Impact were made available to the public for public comment between March 26 and April 25, 2009. One comment letter and one e-mail were received and a full response is found in Attachment 2 of this decision.

III. DECISION

Based on site-specific analysis, the supporting project record, management recommendations contained in the *Wild Rogue North Watershed Analysis* and the *West Fork Cow Creek Watershed Analysis*, as well as the management direction contained in the *Medford Record of Decision and Resource Management Plan (ROD/RMP, 2008)*, *Record of Decision and Standards and Guidelines of the Northwest Forest Plan (1994)*, *Medford District Resource Management Plan and Record of Decision (1995)* and *Evaluation of the Medford Resource Management Plan Relative to Four Northern Spotted Owl Reports (2005)*, I have decided to implement the proposed activities as described in **Alternative 3**, in two separate decisions. This decision

includes activities are planned to occur between 2009 and 2016.

The Aquatic Conservation Strategy Consistency Analysis is found under Attachment 1.

ALTERNATIVES CONSIDERED

The alternatives considered in detail included the No Action Alternative (Alternative 1), which serves as the baseline to compare effects, the Proposed Action (Alternative 2), which initiated the environmental analysis process, and Alternative 3, the Selected Alternative. A description of these alternatives is found on pages 31 – 36 of the EA.

REASONS FOR THE DECISION

My rationale for the decision is as follows:

1. The Selected Alternative (Alternative 3) addresses the purpose and need objectives as stated in the Anaktuvuk Thin EA:
 - Pre-commercial thinnings to “control stand density, influence species dominance, maintain stand vigor, and place stands on developmental paths so that desired stand characteristics result in the future” (1995 RMP, p.185).
 - “silvicultural systems and activities should be based on the objectives of the land allocation, ecological processes, site and stand characteristic, and economic feasibility” (1995 RMP, p 180).
 - “Apply silvicultural practices for riparian reserves to control stocking, re-establish and manage stands, and acquire desired vegetation characteristics to attain Aquatic Conservation Strategy and riparian reserve objectives” (1995 RMP. p 27).
 - Pruning to “increase wood quality through the production of clear wood on rotations shorter than would be required without the action” (1995 RMP, p.185).
 - “Produce a sustainable supply of timber and other forest commodities to provide jobs and contribute to community stability” (1995 RMP, p. 38).
 - “Reduce tree mortality and restore the vigor, resiliency, and stability of forest stands that are necessary to meet land use allocations objectives” (1995 RMP, p. 62).
2. Alternative 1 was not selected because this alternative would not meet the purpose and need of the project as described in Chapter 1 of the EA.
3. Alternative 2 was essentially the same as Alternative 3 for the no-timber harvesting activities of brushing, pre-commercial thinning, removing biomass and pruning. However, Alternative 3 was overall more economically feasible than Alternative 2 as analyzed for in the EA.
4. New information regarding the NSO from the following four reports was also considered in this decision.

- *Scientific Evaluation of the Status of the Northern Spotted Owl* (Sustainable Ecosystems Institute, Courtney et al. 2004);
- *Status and Trends in Demography of Northern Spotted Owls, 1985-2003* (Anthony et al. 2004);
- *Northern Spotted Owl Five Year Review: Summary and Evaluation* (USFWS, November 2004); and
- *Northwest Forest Plan – The First Ten Years (1994-2003): Status and trend of northern spotted owl populations and habitat, PNW Station Edit Draft* (Lint, Technical Coordinator, 2005).

To summarize these reports, although the agencies anticipated a decline of NSO populations under land and resource management plans during the past decade, the reports identified greater than expected NSO population declines in Washington and northern portions of Oregon, and more stationary populations in southern Oregon and northern California. The reports did not find a direct correlation between habitat conditions and changes in NSO populations, and they were inconclusive as to the cause of the declines. Lag effects from prior harvest of suitable habitat, competition with Barred Owls, and habitat loss due to wildfire were identified as current threats; West Nile Virus and Sudden Oak Death were identified as potential new threats. Complex interactions are likely among the various factors. This information has not been found to be in conflict with either the Northwest Forest Plan or Medford District RMP (*Evaluation of the Medford Resource Management Plan Relative to Four Northern Spotted Owl Reports*, 2005). The Selected Alternative meets the Medford District RMP goal regarding conservation of species while providing a sustainable supply of timber.

5. Two groups commented during the 30-day comment period on the EA and FONSI. One letter and one e-mail were received during the 30 day public comment period for the EA and FONSI. The e-mail from KS Wild stated “Given that Anaktuvuk is a project we support, KS Wild may decide not to comment on this one.” BLM responded in full to the letter (Attachment 2). Though the letter requested additional information, it did not identify a flaw in assumptions, analysis, or data that would alter the environmental analysis disclosed in the EA or conclusions documented in the FONSI.

IV. FINDING OF NO SIGNIFICANT IMPACT (FONSI)

The proposed treatments for brushing, pre-commercial thinning, removing biomass and pruning were analyzed under the Anaktuvuk Thin Environmental Assessment (EA-OR118-06-010). The EA included a Finding of No Significant Impact (FONSI). As mentioned above, one letter and one e-mail were received during the 30 day public comment period for the EA and FONSI. The e-mail from KS Wild stated “Given that Anaktuvuk is a project we support, KS Wild may decide not to comment on this one.” BLM responded in full to the letter (Attachment 2). Though the letter requested additional information, it did not identify a flaw in assumptions, analysis, or data that would alter the environmental analysis disclosed in the EA or conclusions documented in the FONSI. It is my determination that Alternative 3 will not significantly affect the quality of the human environment, individually or cumulatively with other actions in the general area. No environmental effects meet the definition for significance, outside what has been analyzed in the

higher level environmental documents, in context or intensity as defined in 40 CFR § 1508.27. Therefore an environmental impact statement will not be prepared.

V. PLAN CONSISTENCY

This decision is in conformance with the Medford District's 2008 Record of Decision and Resource Management Plan (2008 ROD/RMP). The analysis supporting this decision tiers to the 2008 Final Environmental Impact Statement for the Revision of the Resource Management Plan of the Western Oregon Bureau of Land Management (2008 Final EIS).

Revision of a resource management plan necessarily involves a transition from the application of the old resource management plan to the application of the new resource management plan. A transition from the old resource management plan to the new resource management plan avoids disruption of the management of BLM-administered lands and allows the BLM to utilize work already begun on the planning and analysis of projects.

The 2008 ROD allowed for such projects to be implemented consistent with the management direction of either the 1995 resource management plan, as amended (1995 RMP), or the 2008 RMP, at the discretion of the decisionmaker.

This project is in compliance with the 1995 RMP and meets the requirements designated in the 2008 ROD for such transition projects:

1. A decision was not signed prior to the effective date of the 2008 ROD.
2. Preparation of the National Environmental Policy Act documentation began prior to the effective date of the 2008 ROD. The Scoping Report for the Anaktuvuk Thin Project was made available to the public in April 2007.
3. A decision on the project will be signed within two years of the effective date of the 2008 ROD.
4. Regeneration harvest would not occur in a late-successional management area or any harvest in deferred timber management area.
5. There would be no destruction or adverse modification of critical habitat designated for species listed as endangered or threatened under the Endangered Species Act.

Since the planning and design for this project was initiated prior to the 2008 ROD, it contains certain project design features that are not consistent with the management direction contained in the 2008 RMP, including:

- The 2008 ROD allows thinning and other silvicultural treatments in the riparian area within 60 feet of a perennial streams and intermittent fish bearing streams and within 35 feet of intermittent non-fish bearing streams. The EA states that between 60 and up to 110 feet wide, measured from bankfull width, a variable width ecological protection zone (EPZ) would be used to protect water quality within the stream. This buffer is based on the Ecological Protection Width Needs chart in the Record of Decision for the NWFP Standards and Guidelines (ROD, 1994). Pre-commercial thinning, brush removal and fuels treatments will not occur within 60' of all streams.

- Within the NWFP riparian reserve, outside the variable width EPZ, canopy closures and shade levels at breast height would remain above 50%.

The 2008 ROD anticipated these inconsistencies and projected that they would not alter the analysis of effects in the associated final environmental impact statement. The Anaktuvuk Thin Project does not propose regeneration harvesting. The 2008 ROD anticipated that the primary inconsistency with the 2008 RMP Plan would be the retention of merchantable material in regeneration harvest units for green tree retention, snags, and coarse woody debris where the management direction in the 2008 RMP would direct the removal of all merchantable material. This type of inconsistency would result in less change to the current condition of the affected environment described in the 2008 EIS than if the project was consistent with the management direction in the 2008 RMP.

The implementation of this project will not have significant environmental effects beyond those already identified in the 2008 Final EIS/Proposed RMP. The proposed action does not constitute a major federal action having significant effects on the human environment; therefore, an environmental impact statement will not be prepared.

VI. ADMINISTRATIVE REMEDIES

This decision is a forest management decision. Administrative remedies are available to persons who believe they will be adversely affected by this decision. In accordance with the BLM Forest Management Regulations (43 CFR § 5003.2(1)), the decision for this project will not become effective, or be open to formal protest, until the first Decision Notice appears in a newspaper of general circulation in the area where the lands affected by the decision are located.

To protest a forest management decision, a person must submit a written and signed protest to the Glendale Field Manager, 2164 NE Spalding Avenue, Grants Pass, OR 97526 by the close of business (4:30 p.m.) not more than 15 days after publication of the Decision Notice. The protest must clearly and concisely state which portion or element of the decision is being protested and why it is believed to be in error, as well as cite applicable regulations. Faxed or emailed protests will not be considered.

VII. IMPLEMENTATION DATE

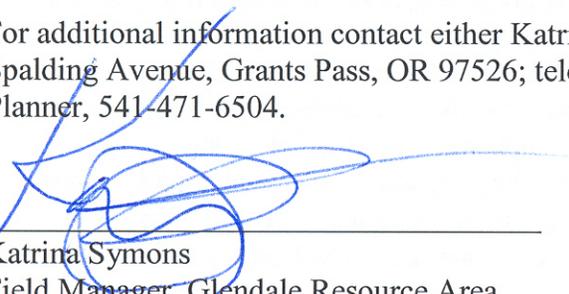
If no protest is received by the close of business (4:30 p.m.) within 15 days after publication of the Notice of Decision, the decision will become final. If a timely protest is received, the decision will be reconsidered in light of the statement of reasons for the protest and other pertinent information available, and a final decision will be issued in accordance with 43 CFR § 5003.3.

To protest a forest management decision, a person must submit a written and signed protest to the Glendale Field Manager, 2164 NE Spalding Avenue, Grants Pass, OR 97526 by the close of business (4:30 p.m.) not more than 15 days after publication of the Notice of Decision on June 19, 2009. The protest must clearly and concisely state which portion or element of the decision is being protested and why it is believed to be in error, as well as cite applicable regulations.

Faxed or emailed protests will not be considered.

VIII. CONTACT PERSON

For additional information contact either Katrina Symons, Glendale Field Manager, 2164 NE Spalding Avenue, Grants Pass, OR 97526; telephone 541-471-6653 or Martin Lew, Ecosystem Planner, 541-471-6504.



Katrina Symons
Field Manager, Glendale Resource Area
Medford District, Bureau of Land Management



Date

ATTACHMENT 1

AQUATIC CONSERVATION STRATEGY CONSISTENCY ANALYSIS

“The Aquatic Conservation Strategy was developed to restore and maintain the ecological health of watersheds and aquatic ecosystems contained within them on public lands. The strategy would protect salmon and steelhead habitat on federal lands managed by the Forest Service and Bureau of Land Management within the range of the Pacific Ocean anadromy” (Medford District RMP pg. 22).

The four components of the Aquatic Conservation Strategy (ACS) are riparian reserves, key watersheds, watershed analysis, and watershed restoration. The ACS was designed to meet the nine objectives discussed below.

This ACS consistency analysis evaluates all Action Alternatives (Alternatives 2 and 3) on BLM land in the Anaktuvuk Thin Project EA.

Analysis of the Four Components of the ACS:

1. Riparian Reserves: The proposed projects in the Action Alternatives are consistent with the actions and directions within Riparian Reserves as described in the Medford District RMP. The Action Alternatives would result in 25 acres of overstory thinning and understory treatments to promote forest health and the development of large woody debris (LWD) within Riparian Reserves outside the ecological protection zone. Thinning would be designed to expedite the development of late successional, multi-story habitat conditions and restore the species composition and structural diversity of the plant communities, needed to achieve ACS and riparian reserve objectives (Medford RMP, pg 22, pg 26 respectively). Riparian reserves within the proposed units are currently dominated by smaller diameter stands of Douglas fir and some hardwoods. Most riparian stands are lacking large wood debris, downed logs, and large tree structure. Thinning of dense riparian reserves would reduce competition on the retained trees for light, nutrients, water and growing space, allowing trees would develop larger canopies, display better vigor and put on diameter growth faster than if left untreated. To access these stands a total of up approximately 1400 feet of new skidtrails would be constructed. Existing skidtrails would also be used during extraction of timber from these stands. These treatments would be implemented in a manner consistent with riparian reserve and ACS objectives.

The projects in the Action Alternatives are also consistent with the Best Management Practices (BMP) within Appendix D of the Medford RMP. As stated in Section 1.4.2 Purpose (Objectives) for Action, the Anaktuvuk Thin Project EA would manage Riparian Reserves to restore and maintain the ecological health of watersheds and aquatic ecosystems by: controlling stocking, re-establish and manage stands, and acquire desired vegetation characteristics needed to attain Aquatic Conservation Strategy and riparian reserve objectives (RMP, p. 27);

2. Key Watershed: The Planning Area is located partially in a Key watershed.

3. Watershed Analysis: The Glendale Resource Area completed the West Fork Cow Creek Watershed Analysis in 1997 and Wild Rogue North Watershed Analysis in 1999. The proposed activities in the Action Alternatives are consistent with both Watershed Analyses.

The Watershed Analysis found that management directions in the Northwest Forest Plan and the RMP including the Aquatic Conservation Strategy, Best Management Practices, and Riparian Reserve management would be adequate at protecting, maintaining and improving aquatic and riparian ecosystems.

The West Fork Cow Creek and Wild Rogue North Watershed Analyses recommended reducing road densities which are not needed for future management. Through the planning process roads were identified to be decommissioned based on current and future BLM management needs and existing reciprocal right-of-way agreements.

The Wild Rogue North Watershed Analysis discussed restricting road construction or considering alternatives to constructing new roads in sensitive soil areas. The West Fork Cow Creek Watershed Analysis discussed reducing road densities and minimizing road construction because it is a Key Watershed. The map of unstable soil areas provided in the Watershed Analysis was taken into consideration. On the ground, site specific surveys were conducted within the Planning Area and areas of fragile or unstable soils were buffered accordingly. Site specific, on the ground surveys provided more detailed and accurate information on areas requiring buffers.

4. Watershed Restoration: Though the Anaktuvuk Thin Project is not a watershed restoration project, it would aid in the improvement of watershed health through the following proposed activities: road decommissioning, road maintenance, biomass removal, and thinning and fuels reduction in Riparian Reserves. Anaktuvuk Thin would not have an adverse effect on restoration efforts.

Analysis of the Anaktuvuk Thin Project EA Action Alternatives' consistency with the Aquatic Conservation Strategy objectives:

The ACS gives direction to maintain and restore ecosystem health at watershed and landscape scales. For the purposes of this analysis the watershed scale will be discussed in terms of site or project scale and will be at the HUC 6 and 7 watersheds. The landscape scale will be at the HUC 5 watershed level.

The ACS analysis is based primarily on the analysis found in the Anaktuvuk Thin Project EA Soils (3.4) and Water Resources (3.5).

Appropriate consideration of potential cumulative effects is a critical element in determining a project's consistency with the ACS. The Soils and Water Resources sections (3.4 and 3.5) in the Anaktuvuk Thin Project EA determined there would be no measurable cumulative effects at the HUC 6 or HUC 5 scales. The minimal effects at the HUC 7 scale would not reach a magnitude detectable at the HUC 6 or HUC 5 scales. Because there would be no detectable cumulative effects caused by the Action Alternatives, cumulative effects will not be discussed in the

individual ACS objectives.

1. Maintain and restore the distribution, diversity, and complexity of watershed and landscape-scale features to ensure protection of the aquatic systems to which species, populations and communities are uniquely adapted.

The watershed and landscape-scale features which protect species, populations, and communities dependent on aquatic systems would be maintained and in some cases enhanced in the short term and long term. The distribution, diversity, and complexity of watershed and landscape-scale features needed for the protection of aquatic systems would be maintained. Proposed activities such as road maintenance, road decommissioning, and riparian thinning would restore watershed features in the short and long term.

Riparian Reserves

One key component of watershed and landscape scale features needed for the protection of aquatic systems is Riparian Reserves. Riparian Reserves would be maintained at the site and watershed levels in the short and long term. Riparian vegetation treatments (thinning) would enhance riparian characteristics. Riparian thinning would result in a reduction in stand densities in young dense stands and would allow for the development of late successional riparian characteristics. Some of these characteristics include multi-level canopy cover which helps to maintain cool water temperatures. Late successional characteristics in riparian areas also include downed coarse woody debris and LWD which increases channel complexity. Late successional characteristics in riparian areas also include diverse species composition which provides a variety of chemical and biological inputs to streams. Riparian thinning would also reduce the spread of disease and the risk of a high intensity or severity fire within Riparian Reserves. Such a fire could result in tree mortality and a reduction in shade, which could negatively affect fish habitat by causing an increase in water temperature, a reduction in future recruitment of LWD, an increase in soil erosion and sediment entering streams.

Roads

The action alternatives for this project would result in temporary road reconstruction, use, and decommissioning within units 9-1, 9-2, and 9-3 that would lead to stream sedimentation. Sedimentation would result from the installation and removal of four stream crossing culverts during the reconstruction and decommissioning of this road. There would also be a small amount of stream sedimentation from the use of this road at stream crossing locations. A small amount of sediment may also enter streams during log haul and existing road maintenance where roads are hydrologically connected. All sediment producing actions would result in measurable increases in sediment for no more than 25 feet downstream of the impact point, and would all be within the State of Oregon water quality standard of no more than a 10% increase in turbidity above and below the action.

Maintenance, road decommissioning, and culvert/crossdrain replacement and road reconstruction would reduce sediment entering stream channels in the short and long term. Road maintenance would generally reduce chronic erosion problems and reduce sediment input to streams. Replacing failing culverts with ones sized to meet 100 year flood events would reduce the risk of culverts plugging and washing out. Culvert failures would result in the fill within the road prism

entering stream channels, increasing sediment loads streams. Decommissioning roads would result in a short and long term reduction of sediment entering streams. Removing the culverts and/or crossdrains and stabilizing the drainage on the roads would reduce the potential of the roads failing and sediment entering stream channels. When culverts fail a large amount of material generally enters streams from the road fill material.

The new temporary route construction proposed in Alternatives 2 and 3 would not increase road densities to the magnitude to cause road related effects to streams at the HUC 5, 6, or 7th scale in the short or long term. The proposed new temporary route construction locations would not increase sediment input to streams beyond state water quality standards, and would not measurably alter aquatic habitat or macroinvertebrate populations, or measurably alter drainage patterns because of the location of the roads, the low number of stream crossings, the lack of new construction within Riparian Reserves, and the PDFs which guide the construction and decommissioning of new roads. The new roads would be located on stable sites, on ridgetops or near ridges, and with few stream crossings. This project would not increase the number of permanent roads within this sub-watershed, since permanent road building is not part of the proposed project. No future permanent road construction is planned on federally managed lands within this sub-watershed.

Peak Flows

Alternative 2 and 3 would not affect the timing, magnitude, duration, and spatial distribution of peak, high and low flows. No regeneration harvest or overstory removal is proposed in either of these alternatives.

2. Maintain and restore spatial and temporal connectivity within and between watersheds. Lateral, longitudinal, and drainage network connections include floodplains, wetlands, upslope areas, headwater tributaries, and intact refugia. These network connections must provide chemically and physically unobstructed routes to areas critical for fulfilling life history requirements of aquatic and riparian-dependent species.

The spatial and temporal connectivity within and between watersheds would be maintained in the short and long term at the site and landscape scales. Chemically and physically unobstructed routes to areas critical for fulfilling life history requirements of aquatic and riparian-dependent species would be maintained and in the case of the culvert replacements improved.

3. Maintain and restore the physical integrity of the aquatic system, including shorelines, banks, and bottom configurations.

The physical integrity of aquatic systems, including shorelines, banks, and bottom configurations would not be affected at the site or landscape scale in the short or long term. The proposed activities in the Action Alternatives would not manipulate or affect shore lines, banks or bottom configurations, with the exception of the four temporary stream crossings. The temporary stream crossings would maintain bank and bottom configurations by removing the pipes after harvest is complete.

4. Maintain and restore water quality necessary to support healthy riparian, aquatic, and

wetland ecosystems. Water quality must remain within the range that maintains the biological, physical, and chemical integrity of the system and benefits survival, growth, reproduction, and migration of individuals composing aquatic and riparian communities.

Water quality necessary to support healthy riparian, aquatic and wetland ecosystems would be maintained. Water quality would remain within the range that maintains biological, physical, and chemical integrity streams.

Slight increases in turbidity would occur in the short term in localized areas as a result of road activities. Project Design Features (PDFs) were designed to minimize the amount and duration of sediment entering stream channels. Such increases in turbidity would not measurably alter the biological, physical, or chemical integrity of streams. Aquatic and riparian dependent species' survival, growth, reproduction, and migration would be maintained.

The new temporary road construction on BLM land (1.1 miles), thinning activity, road maintenance and hauling activity, and fuel treatments would have no effect on Southern Oregon Northern California (SONC) and Oregon coast (OC) coho salmon (ESA-Threatened) or coho critical habitat (CCH). The closest coho presence and CCH in Walker Creek and Mule Creek is approximately 1.92 miles (10,140feet) and 0.39 mile (2,059 feet) respectively from the proposed project. Sediment would not be transported to CCH because of the dry condition haul, ridgeline location, EPZs, the location of the road outside of riparian reserves (four stream crossings), the proximity of the road to fish habitat and the design features to reduce the transmission of fine sediment. Sediment resulting from the installation of the road culverts, use, and decommissioning of the road, would not be of a magnitude that would result in a visible increase in stream turbidity, or a measurable increase in the overall stream sediment deposition for more than 25 feet downstream within any of the stream channels.

5. Maintain and restore the sediment regime under which aquatic ecosystems evolved. Elements of the sediment regime include the timing, volume, rate, and character of sediment input, storage, and transport.

The sediment regime under which aquatic ecosystems evolved would be maintained at the site and landscape scales in the short and long terms. Some of the proposed activities such as road maintenance would reduce sediment input in the short and long term. Streams within the Planning Area evolved with sediment input. Sediment input can result from natural disturbances such as landslides, slumps, wildfires, bank erosion, and channel scour.

Road Related Activities

The following road related activities proposed in all Action Alternatives could deliver sediment to streams: hauling, temporary road reconstruction, and road decommissioning. Sediment input would primarily be seen during the first winter. Because of PDFs the amount of sediment entering streams from road related activities would be minimal. Changes in embeddedness, interstitial spaces, and pool depth would not be measurable. Following the first winter and thereafter sediment entering streams would decrease to the point of being negligible.

Roads proposed for dry condition haul would result in negligible amounts of sediment entering

streams because the roads are either bituminous surface treatment (BST) or crushed aggregate (rocked) or are hydrologically disconnected due to ridgetop location of timbersale units. The roads proposed for dry condition haul could result in sediment entering stream channels, however; several PDFs for dry condition haul were developed to reduce sediment entering stream channels from hauling. One PDF specifically addressed the conditions in which log haul would be suspended to prevent resource damage from occurring, “Log haul on all road surface types would be suspended by the Authorized Officer at any time if road damage may occur, or road drainage is visibly increasing stream turbidities, or where surface conditions are being created that would result in water being chronically routed away from designed drainage patterns (i.e. Water is running down the road instead of ditchlines or downslope vegetation).” (EA, Section 2.3.6.2). Negligible changes to stream channels from sediment input would be expected. Changes in embeddedness, interstitial spaces, and pool depth would not be measurable.

Road maintenance would result in a minimal amount of sediment reaching stream channels. Increased sediment levels from road maintenance would not be detectable above background levels following the first few substantial rain events, therefore sediment input would be short term. Negligible changes to stream channels from sediment input would be expected. Changes in embeddedness, interstitial spaces, and pool depth would not be measurable. Following the first winter and thereafter sediment entering streams would decrease to the point of being negligible.

Road maintenance would generally reduce chronic erosion problems and reduce sediment input to streams. Replacing failing culverts with those sized to meet 100 year flood events would reduce the risk of culverts plugging and washing out. Culvert failures would result in road prism fill entering stream channels, increasing sediment loads in stream channels.

Decommissioning the proposed temporary roads would result in long term benefits to streams and fish habitat. Removing the culverts, crossdrains and stabilizing the drainage on the roads would reduce the potential of the roads failing and sediment entering stream channels.

Harvest Activities

All other soil disturbing activities are located outside the EPZ, and would be implemented using BMP's that minimize the quantity and transport of soil erosion. Since the EPZ is designed to filter out sediment produced during upslope activities that are implemented using BMP's, these activities would not result any sediment entering streams.

6. Maintain and restore in-stream flows sufficient to create and sustain riparian, aquatic, and wetland habitats and to retain patterns of sediment, nutrient, and wood routing. The timing, magnitude, duration, and spatial distribution of peak, high, and low flows must be protected.

Alternative 2 and 3 would not affect the timing, magnitude, duration, and spatial distribution of peak, high and low flows. No regeneration harvest or overstory removal is proposed in either of these alternatives.

7. Maintain and restore the timing, variability, and duration of floodplain inundation and water table elevation in meadows and wetlands.

The timing, variability, and duration of floodplain inundation and water table elevation in meadows and wetlands would not be affected by any of the Action Alternatives. There are no wetlands, as defined on page 117 of the RMP, within the Planning Area.

8. Maintain and restore the species composition and structural diversity of plant communities in riparian areas and wetlands to provide adequate summer and winter thermal regulation, nutrient filtering, appropriate rates of surface erosion, bank erosion, and channel migration and to supply amounts and distributions of coarse woody debris sufficient to sustain physical complexity and stability.

The species composition and structural diversity of plant communities in riparian areas would be maintained at the site and landscape scales in the short and long term. There are no wetlands, as defined on page 117 of the RMP, within the Planning Area. Vegetation treatments proposed in all the Action Alternatives were designed to enhance riparian conditions in the short and long term. Plant communities in riparian areas would be maintained and enhanced through silvicultural prescriptions and no treatment buffers in order to provide for adequate summer and winter thermal regulation, nutrient filtering, appropriate rates of surface erosion, bank erosion, and channel migration and to supply amounts and distributions of coarse woody debris sufficient to sustain physical complexity and stability.

9. Maintain and restore habitat to support well-distributed populations of native plant, invertebrate and vertebrate riparian-dependent species.

Habitat for riparian-dependent plant, invertebrate and vertebrate species would be maintained at the site and landscape scales. Vegetation treatments proposed in all the alternatives were designed to enhance riparian conditions in the short and long term. There would not be a reduction of habitat needed to support riparian dependant species in the short term or long term.

CONCLUSION:

Based on this analysis at both the site and landscape scale of the proposed activities in Alternatives 2 and 3, it was determined that the actions are consistent with the nine objectives and the four components of the ACS. This determination was based on the small spatial and temporal disturbances associated with the proposed actions.

ATTACHMENT 2

RESPONSE TO COMMENTS ANAKTUVUK THIN

1. **Comment:** Construction of skid roads and road construction in riparian reserves. The BLM should avoid skid-roads and road construction in riparian reserves. Ground-based logging is relatively damaging to soil, water wildlife and vegetation.

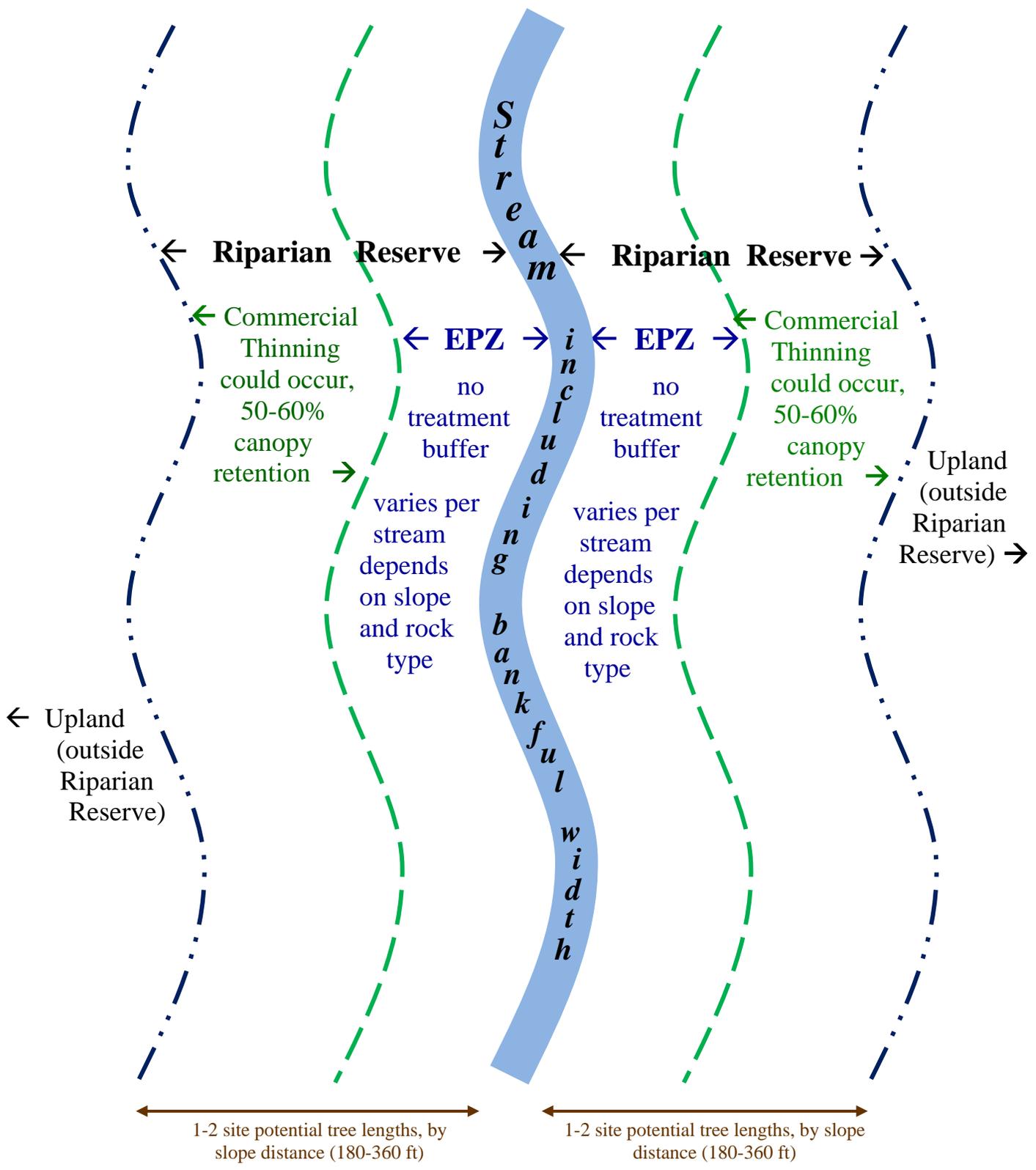
Response: The Anaktuvuk Thin project EA is consistent with the *Medford District Record of Decision/Resource Management Plan* (RMP/ROD, 1995). The Northwest Forest Plan created a riparian reserve land allocation that provided specific standards and guidelines for managing riparian reserves. Pre-commercial thinning will occur within 25' of streams. See illustration below. Specific Best Management Practices, as required by the Federal Clean Water Act, are identified as Project Design Features in the EA. While the comment from Oregon Wild is general in nature without specifics, the EA clearly states on pages 21 and 22 that:

To expedite the development of late-successional, multi-story habitat conditions and “restore the species composition and structural diversity of the plant communities” needed to achieve ACS and riparian reserve objectives (RMP, pp. 22, 26), portions of the riparian reserves would be treated as part of this project. Small canopy gaps would also be created outside the primary shade zones, as necessary to promote multiple-layered stands and promote species diversity that is a key element in late-successional habitat. The West Fork Cow Creek and Wild Rogue North Watershed Analyses were used in the analysis of this project. Treatments within the riparian reserves would be done in accordance with the following protection zones:

- On all units, a minimum 25 foot no treatment buffer, from bankfull width, would be used to protect streambank stability.
- Where treatments occur between 25' - 60' of the stream, angular canopy density would remain at existing levels to protect stream shading. Understory trees, which are not providing shade, would be treated within this buffer to reduce fire hazard and to improve the vigor of the remaining overstory trees by increasing available growing space, water, and nutrients.
- Between 60 and up to 110 feet wide, measured from bankfull width, a variable width ecological protection zone (EPZ) would be used to protect water quality within the stream. This buffer is based on the Ecological Protection Width Needs chart in the Record of Decision for the NWFP Standards and Guidelines (ROD, 1994). Within this buffer zone only forest health treatments would occur and angular canopy density would remain within 5% of existing levels to protect stream shading and temperature. No ground disturbing yarding methods would be used within the EPZ. All pre-existing coarse and large woody debris would be left on site.

- Canopy closures within the NWFP riparian reserve that are outside the variable width ecological protection zone (EPZ) would remain above 50%. All pre-existing large woody debris would be left on site.

Riparian Thinning and Riparian Management Adjacent to Streams, Illustrated



The Glendale Resource Area recognizes the voluminous amount of studies and research regarding riparian reserves. The development of riparian reserves and standard and guidelines were done by a group of scientists working on the Northwest Forest Plan. The West Thin EA incorporates the scientific studies done for the NWFP. The ROD (p. C-32) states under Standards and Guidelines to “Apply silvicultural practices for Riparian Reserves to control stocking, reestablish and manage stands, and acquire desired vegetation characteristics needed to attain Aquatic Conservation objectives.”

The Anaktuvuk Thin Project meets the objectives of water quality standards, would supply potential large woody material and down wood and manage for sensitive riparian-dependent species within a landscape context. The riparian reserve widths in conjunction with best management practices would provide adequate stream protection.

2. **Comment:** Biomass extraction in pre-commercial stands.
The additional effects of heavy equipment in stands of young trees must be disclosed.

Response: The BLM disclosed the effects of heavy equipment as required by 40 Code of Federal Regulations (CFR) § 1502.16. The BLM has not made a final decision on what treatments would be included in the selected alternative. While Alternative 2 includes the removal of biomass, Alternative 3 does not include biomass removal. The removal of biomass in pre-commercial stands considered the impacts of compaction and productivity under Alternative 2. The PDFs in the EA provide limitations to the effects of heavy equipment in all treatment areas, such as, clearly stating on page 23 of the EA that:

Productivity loss resulting from topsoil disturbance and soil compaction would not exceed a combined calculated total of 5% of the unit.

The Field Manager’s final decision on what to implement will consider the following:

Units or partial units where biomass removal are not feasible due to economics or where activities would exceed RMP soil compaction or water quality guidelines, lop and scatter and/or slashing, handpile and handpile burn methods would be implemented to meet the desired stand prescription.

The EA acknowledged on pages 70 and 71 that:

Non-commercial and commercial thinning treatments on 182 acres within this Planning Area would result in soil compaction and disturbance as described above. However these treatments would also benefit stand productivity by effectively increasing water and nutrient availability. The even-aged dense stands within this Planning Area are a product of past timber management activities and aggressive fire suppression activities (Forest Operations Inventory database). Many of these stands are currently showing reduced growth rates as a result of overstocked conditions that are causing competition for soil nutrients and water. These treatments would reduce competition on the retained trees for light, nutrients, water and growing space.

3. **Comment:** ACS standards and guidelines.
Follow ACS standards and guidelines that prohibit logging in riparian reserves unless “needed” to attain ACS objectives.

Response: The EA conforms to the ACS standards and guidelines and the nine objectives as provided on page B-11 of the NWFP. The EA provides the decision maker and reader the restrictions for activities in riparian reserves, the minimum distance from streams that any proposed actions would occur, and how the Anaktuvuk Thin is consistent with ACS objectives.

As mentioned in Response to Comment #1, there would be no logging within 75- 110 feet of streams. See Response to #1 above.

As stated on page 25 of the EA under PDFs:

In the area outside the ecological protection zone but within the 180’ (one site potential tree length) NWFP riparian reserve boundary, minimum canopy closures would remain above 50%, and vegetative species diversity would be maintained. All pre-existing coarse woody debris would be left on site [EA, p. 25].

The EA concludes on page 89 that “all actions proposed under the the Anaktuvuk Thin project are more than 1700 feet (~0.3mi) from fish streams in this sub-watershed. Actions within this watershed would therefore be consistent with the Clean Water Act, State of Oregon water quality standards, and ACS objectives. [EA, p. 89]

Page 112 of the EA provides the ACS consistency summary:

<p>Table 3. Aquatic Conservation Strategy Summary. This table lists the four components of the Aquatic Conservation Strategy (RMP pp. 5-7) and the interdisciplinary team’s predicted environmental impact per component if Alternative 2 or Alternative 3 described in the Environmental Assessment were implemented.</p>

Riparian Reserves	Consistent	The Action Alternatives would result in 25 acres of overstory thinning and understory treatments to promote forest health and the development of large woody debris (LWD) within Riparian Reserves outside the ecological protection zone. Thinning would be designed to expedite the development of late successional, multi-story habitat conditions and restore the species composition and structural diversity of the plant communities, needed to achieve ACS and riparian reserve objectives (Medford RMP, pg 22, pg 26 respectively). Riparian reserves within the proposed units are currently dominated by smaller diameter stands of Douglas fir and some hardwoods. Most riparian stands are lacking large wood debris, downed logs, and large tree structure. Thinning of dense riparian reserves would reduce competition on the retained trees for light, nutrients, water and growing space, allowing trees would develop larger canopies, display better vigor and put on diameter growth faster than if left untreated. To access these stands a total of up approximately 1400 feet of new skidtrails would be constructed. Existing skidtrails would also be used during extraction of timber from these stands. These treatments would be implemented in a manner consistent with riparian reserve and ACS objectives.
Key Watershed	Present	The Proposed Action is partially located in a Tier 1 Key watershed, the West Fork of Cow Creek. All actions proposed under this project would be consistent with the objectives within a Tier 1 watershed.
Watershed Analysis	Consistent	West Fork Cow Creek Watershed Analysis, 2005 Wild Rogue North Watershed Analyses, 1999 :
Watershed Restoration	Consistent	Although the Proposed Action is not a component of the resource area's watershed restoration program, it would not have an adverse effect on restoration efforts.

4. **Comment:** Recommendations

Oregon Wild provides a list of 15 recommendations for restoration-thinning prescriptions. Make the NEPA analysis transparent and explicit to these issues.

Response: The BLM evaluated all 15 of Oregon Wild's recommendations and determined that they are general in nature and do offer new information that would not require the BLM to: 1) modify alternatives including the proposed action, 2) develop and evaluate alternatives not previously given serious consideration by the agency, 3) supplement, improve, or modify its analysis, 4) or make factual corrections (40 CFR §1503.4). The Anaktuvuk Thin EA conforms to the Medford RMP and NWFP and their Environmental Impact Statements.

For example, Oregon Wild states that "When conducting commercial thinning projects take

the opportunity to implement other critical aspects of watershed restoration especially pre-commercial thinning, restoring fish passage, reducing the impacts of the road system, and treating invasive weeds.”

The BLM clearly states in the purpose and need of the Anaktuvuk Thin EA that:

The O & C Lands Act requires the Secretary of the Interior to manage O&C lands for permanent forest production in accord with sustained yield principles

The Anaktuvuk Planning Area is within O & C lands administered by the Department of the Interior, BLM National System of Public Lands “for permanent forest production... in conformity with the principles of sustained yield for the purposes of providing a permanent source of timber supply” (O&C Act).

Forest Management is appropriate at this time to manage developing stands in the Anaktuvuk Thin PA in order to reduce stand density for residual tree development and provide an entry that is economical.

Another of their general recommendations is to develop an alternative that addresses carbon and climate.

The Medford RMP/EIS Volume III states that “There is no scientific consensus on which to base an explicit assumption of the rate or degree of such change in Southern Oregon. Nor, if there were, is there an adequate scientific basis for translating such changes into expected changes in timber yield or biological diversity (p. 17). The RMP/EIS Volume 1 analyzed the effects on global climate and concluded that “the cumulative effects of BLM activities under the PRMP and similar activities proposed or anticipated on other forestlands in western Oregon for the expected 10-year life of the RMP would add an estimated 180 tons of carbon dioxide to the world’s atmosphere, increasing carbon by 0.2 percent...The effect on global climate change would be slight” (p. 4-8). Oregon Wild has not offered any method for analyzing carbon and climate and what differences to measure between a new alternative.

5. **Comment:** Thinning in Riparian Reserves

Pool forming size, landslide prone areas, confusing “accelerated attainment of ACS areas with ACS compliance.”

Response: Oregon Wild provides a general list of recommendations that does not offer new information that would not require the BLM to: 1) modify alternatives including the proposed action, 2) develop and evaluate alternatives not previously given serious consideration by the agency, 3) supplement, improve, or modify its analysis, 4) or make factual corrections (40 CFR §1503.4).

As mentioned in BLM response to Comment #4 above, “The closest fish bearing stream is more than 1700 feet (~0.3mi) from fish streams in this sub-watershed.” Oregon Wild fails to identify any perennial stream that they have a concern regarding pool forming size or identify

any landslide prone areas in or adjacent to the planning area or how any of the treatments would affect any element of the environment. The BLM responded to meeting ACS objectives in its response to Comment #3 above.

6. **Comment:** Long- term benefits versus short-term degradation of ACS objectives

Response: The BLM responded to meeting ACS objectives in its response to Comment #3 above.

7. **Comment:** Temporary Roads. If young stand thinning requires construction of temporary roads, the agency should do an analysis that illuminates how many acres of thinning are reached by each road segment so that we can distinguish between short segments of spur that allow access to large areas (big benefit, small cost) and long spurs that access small areas (small benefit, big cost). This can help inform the decision-maker's balancing of the costs and benefits of thinning and roading.

Response: The BLM provided specific information on temporary road location for the decision maker to make an informed decision. CFR § 1500.1 states that NEPA's purpose is not to generate paperwork- even excellent paperwork- but to foster excellent action. The NEPA process is intended to help public officials make decisions that are based on understanding of environmental consequences, and take actions that protect, restore, and enhance the environment.

The BLM considered cost efficiency of harvesting without ground based systems (EA, p. 96) and determined that:

As stated on page 23 of the EA "There is a risk of a no bid sale when values of timber are low and costs are relatively high, such as the Anaktuvuk Thin Project."

An alternative without ground based (tractor) logging was not considered because it did not meet the purpose and need of this project "silvicultural systems and activities should be based on the objectives of the land allocation, ecological processes, site and stand characteristic, and economic feasibility" (RMP, p 180). The IDT estimated that the cost to skyline yard or helicopter yard 145 acres would be economically infeasible. The IDT evaluated the more economical Alternative 3 (does not include biomass removal) using current timber values and logging costs to conclude that the sale would be offered for sale at a net loss of approximately \$33,000 for cable logging only and an approximate net loss of \$211,000 for only helicopter logging. Log market prices have been deteriorating the past year due to lack of demand. The costs for helicopter logging are much higher than conventional harvesting systems. A small heavy helicopter such as a K-Max can lift up to 5,000 pounds and can be used for logs less than 1,000 pound (less than 24 inches DBH). Move in costs would be approximately \$10,000 per ship.

The estimated appraisal costs of helicopter yarding was \$400 mbf, the cost for cable yarding was \$250/mbf, and \$175/mbf for tractor logging.

The EA identified that of the 1.1 miles of temporary routes to be used, four existing temporary route segments totaling 0.9 mile would be re-constructed and two segments totaling 0.2 mile would be constructed and then decommissioned. It was determined by the interdisciplinary team that the use of 0.9 miles of existing temporary routes was the most efficient and least impactful method rather than new construction. An analysis was then done to evaluate the economic feasibility of each alternative. Oregon Wild has not indicated how this analysis is flawed and not sufficient for the decision maker or offered any new information other than to create more paperwork.

8. **Comment:** Variable density thinning.

“We urge you to prescribe variable spacing for all thinning projects. The great benefits in terms [of] ecosystem processes far outweigh any minor loss of future timber value. The Matrix is not a tree farm. It still has a role to play in providing diverse habitats, so don’t just grow *trees*, grow *forests*. According to the 2003 Draft SEIS for survey and manage, “Matrix was also expected to provide for ecologically diverse early-successional conditions and planned timber harvest.” (DSEIS page 68). Variable density thinning is appropriate in the matrix because VDT expands future options for multiple-use/sustained yield in its fullest dimension and VDT does not foreclose any matrix objectives.”

Response: The BLM clearly states in the purpose and need of the Anaktuvuk Thin EA that the project is for timber harvesting that is economical. Specifically, the Anaktuvuk Planning Area is within O & C lands administered by the Department of the Interior, BLM National System of Public Lands “for permanent forest production... in conformity with the principles of sustained yield for the purposes of providing a permanent source of timber supply” (O&C Act).

The RMP (pg. 72) only allocated approximately 17 percent of the Medford District’s landbase to the matrix land use allocation, from which the majority of the timber harvest is to be derived. The RMP allocated the lands in this project area primarily for timber production and with the general prescription of modified even-aged management that would trend toward a forest composed of stands containing a variety of structures, ages, sizes, and canopy configurations (RMP, p. 187).

Your comment that matrix lands are not tree farms, fails to acknowledge that only 17% of forest lands in the range of the northern spotted owl is within matrix lands (RMP, p.72). These other lands are being managed for other resource values. While commercial thinning is an acceptable forestry practice, it is considered an intermediate harvest method and acknowledged as such in forest management practices taught at accredited forestry colleges and professional organizations such as the Society of American Forestry. Forestry research has not demonstrated that commercial thinning can be sustained in the long term. Douglas-fir is considered a disturbance dependant species needing sufficient light to grow in an open condition. Creating small gaps ultimately will close in due to crown expansion.

Variable density thinning is a silvicultural treatment tool to meet specific management objectives and is not a one size fits all approach.

9. **Comment:** Manage for Decadence

Heavy thinning “captures mortality” and increases vigor thereby delaying recruitment of snags and delaying development of critical components of old growth forests.”

Response: The Anaktuvuk Thin EA is consistent with the management direction of the Medford RMP. The Medford RMP provides specific objectives for managing lands under the matrix land allocation. Those objectives include retaining 15 percent late successional forest, and provide a renewable supply of large trees for cavity using birds, etc. Commercial thinning are scheduled after developing stands reach a combination of stem diameter and surplus volume to permit an entry that is economical (RMP, p. 185).

The RMP (pg. 72) only allocated approximately 17 percent of the Medford District’s landbase to the matrix land use allocation, from which the majority of the timber harvest is to be derived. The RMP allocated the lands in this project area primarily for timber production and with the general prescription of modified even-aged management that would trend toward a forest composed of stands containing a variety of structures, ages, sizes, and canopy configurations (RMP, p. 187). Matrix lands were not set aside for developing old growth forests.