U.S. Department of Interior
Bureau of Land Management
Roseburg District, Oregon

Upper Umpqua Watershed Plan

DECISION RECORD

SECTION 1 - BACKGROUND

Introduction

This Decision Record adopts a scaled back version of Alternative 3 from the Upper Umpqua Watershed Plan Environmental Assessment (EA). This decision is consistent with, and further implements the Roseburg District Resource Management Plan (RMP) adopted in June 1995. The implementation of this decision would accomplish the following objectives over the next ten years within the Upper Umpqua Watershed:

1. For mid seral forests on BLM lands designated as Late-successional and Riparian Reserves, Connectivity/Diversity Block, accelerate stand diversity and development of late-successional characteristics.
2. For mid seral forests on BLM General Forest Management Area (GFMA) lands maintain healthy growth rates and contribute timber for the local and regional economy while protecting certain forest components for wildlife.
3. Reduce the amount of human-caused fine sediment input into streams.
4. Enhance the development of aquatic habitat. Increase the access to spawning and rearing habitat for anadromous fish.

Alternatives Considered

Three alternatives were considered and analyzed in the EA and are summarized below. The EA, Chapter Two, describes the alternatives in detail.

Alternative 1 (No Action)

This alternative would be the continuation of present management resulting in the persistence of the following conditions:

- The tightly stocked 30 to 80 year old forest stands within lands designated as Late-successional and Riparian Reserves and Connectivity/Diversity Blocks, would not develop late-successional habitat characteristics needed for northern spotted owls and marbled murrelets within the next 150 years. Late-successional habitat characteristics would not be expected to develop for at least 200 to 300 years in these stands.

- Commercial timber products from land use allocations would not be made available for the small log market.
- Some roads were identified as contributing higher than natural levels of sediment to streams and are at higher than natural risk of causing landslides. These problem roads would continue to have elevated erosion rates and landslide risks and limit the ability for coho salmon and other fish species to spawn and rear.
- Aquatic habitat would continue to be lacking in diversity for spawning and rearing. Culverts barriers would limit access to about 10 miles of fish habitat.

Alternative 2

Within the Late-Successional and Riparian Reserve land use allocations of the project area, Alternative 2 would thin approximately 6,600 acres to a moderate residual density and about 500 acres to low residual densities to meet the need to accelerate the development of late-successional habitat. Unthinned areas would be provided within a set 40-foot no-harvest buffer for non-fish bearing streams and a 100-foot no-harvest buffer for fish bearing streams. Within the GFMA and Connectivity/Diversity Block land use allocations of the project area, approximately 1,500 acres would be thinned to high residual densities to maintain healthy growth rates and contribute timber to the local and regional economy.

Alternative 3

Within the Late-Successional and Riparian Reserve land use allocations of the project area, Alternative 3 would thin approximately 5,000 acres to a moderate residual density. Within these reserves as well as some of the Connectivity/Diversity Block land use allocations of the project area, this alternative would thin approximately 2,550 acres to low residual densities to meet the need to accelerate the development of late-successional habitat. Unthinned areas would be provided within a variable width no-harvest buffer for non-fish bearing streams and a 100-foot no-harvest buffer for fish bearing streams with smaller patches of unthinned areas in the uplands. One hundred acres of mid seral stands in Connectivity/Diversity Blocks, and the 950 acres in the GFMA would be thinned to high residual density to maintain healthy growth rates and contribute timber to the local and regional economy.

Projects Common to Alternative 2 and 3

Projects associated with timber harvesting:

- Approximately 240 miles of road would be used for timber haul. Approximately six miles of new permanent road and twelve miles of temporary road would be constructed.
- Approximately five culverts with small water impoundments would be maintained for fire suppression use.
- Three existing developed quarries would be used to furnish rock for road improvements and construction.
- Up to 400 acres of landing and piled slash would be burned.

Projects to reduce sediment input into streams:

- Approximately 240 miles of road planned for use in timber haul would be evaluated and improved to reduce sedimentation during and after logging activities.
- The 56 miles of identified problem roads and associated culverts would be fixed to reduce long-term erosion rates and landslide risks.

Projects to improve aquatic habitat:

- The replacement or removal of approximately 26 fish barrier culverts would open about 10 miles of fish habitat.
- Adding log and boulder structures to approximately 15 miles of streams would enhance aquatic spawning and rearing habitat.

Public Involvement

Comments were solicited from affected tribal governments, adjacent landowners and affected State and local government agencies. No comments were received from these sources. During the seventy-five day public review period, comments were received from four individuals or organizations. Comments provided information that has helped in the formulation of this decision however no new information was provided that would alter the conclusions of the analysis.

The Roseburg District received three letters as well as approximately six emails during the public review period. The following highlights the chronology of public input to this process.

1. The general public was notified via the *Roseburg BLM District Quarterly Planning Update* (Spring, 2003), which was sent to approximately 150 addressees. These addressees consist of members of the public that have expressed an interest in Roseburg District BLM projects.
2. Notification was provided to certain state, county and local government offices.
3. A 30-day public comment period was established on June 17, 2003 for review of this EA. A Notice of Availability was published in the *News Review*.
4. On June 17, 2003, an overview of the Upper Umpqua Watershed Plan was presented to the Umpqua Basin Watershed Council and the public. This group includes representatives from agriculture, timber, business and environmental segments of the Umpqua Basin. A summary and copies of the EA were given to interested members of the public during that presentation.
5. During the 30-day public review period, discussions developed over certain aspects of the EA. As a result of those discussions, the public review period was extended for an additional forty-five days through September 1, 2003.
6. The discussions led to a public tour on August 11, 2003. The tour visited sites within Upper Umpqua watershed to illustrate different aspects about the EA.

Public involvement for this watershed plan has been extensive and has influenced the development of this decision. Public comments that were received indicate support for

thinning to meet terrestrial habitat needs as well as projects to reduce sedimentation and improve aquatic habitat needs. The comments also support thinning and using the resulting forest products for the benefit of the local and regional economies. Along with this support, however, concerns were raised about the following general areas, which are addressed below:

- Harvesting older/larger residual trees.
- Some harvest units don't meet the need for thinning.
- The effects of thinning to low residual densities and the desire for variable densities.
- The amount of snags and coarse woody debris remaining in Late Successional and Riparian Reserves after harvest is completed.
- The overall effects of new road construction.
- New road construction effects on habitat fragmentation.
- The effects of road use by off-highway vehicles
- The size of patch openings in Late Successional and Riparian Reserves.
- The spread of noxious weeds.

Harvesting Older/Larger Residual Trees

Public comments were received that expressed concern over harvesting older/larger residual trees.

Consideration Given: BLM recognizes that there is controversy associated with harvesting older/larger residual trees. The RMP provides for the harvest of these types of trees in GFMA and Connectivity/Diversity Block land use allocations. Analysis has shown that the amount of these types of trees to be harvested under this EA is incidental. Small numbers of these types of trees would be harvested for the greater purpose of accelerating late-successional habitat within Late Successional and Riparian Reserves and Connectivity/Diversity Blocks at the forest stand level. Although harvest units containing a greater amount of older/larger trees were adjusted (see next concern) for reasons other than concern about harvesting these types of trees, these adjustments would nonetheless also meet the concern about harvesting older/larger residual trees.

Adjustments Made: Adjustments will be made in the field design of new road construction to minimize harvesting of older/larger trees. These adjustments will be completed while also minimizing impacts to water quality through the project design criteria.

Harvest Units Don't Meet the Need for Thinning

Public comments were received that expressed concern over thinning some forest stands that do not meet the purpose and need of the EA.

Consideration Given: Within the GFMA land use allocation, harvest units were reviewed against the objective of "...maintain[ing] healthy growth rates and contribut[ing] timber for the local and regional economy …". It was decided that this objective would be better met with a different type of harvesting to be covered under a separate EA. Within the Late Successional and Riparian Reserves and Connectivity/Diversity Block land use allocations, harvest units were reviewed against the objective of "...accelerate stand diversity and development of late-successional characteristics …". It was decided that some harvest units are already adequately moving toward this objective and would not need to be treated.

Adjustments Made: Approximately 120 acres of GFMA forests in the 50 to 80 year age class will be dropped from consideration under this EA.

Approximately 500 acres in Late Successional and Riparian Reserve forests are dropped from consideration for thinning for the following reasons:

- Mid seral forest stands that are currently exhibiting late-successional type characteristics were evaluated and dropped from consideration because density management would not meet the purpose of, "accelerat[ing] stand diversity and development of late-successional characteristics …".
- Some mapping errors that included larger blocks of late-successional forest types instead of mid seral forest types have been corrected. Mapping errors will continue to be corrected as unit boundaries are refined in the field.
- The control area for the Little Wolf Density Management Study will not be harvested to allow for continuation of the long-term study.

Approximately one mile of new road construction was dropped from consideration when these harvest units were dropped.

Thinning to Low Residual Densities and the Desire for Variable Densities

Public comments were received that expressed concern that low residual density thinning would harvest too many trees in Late Successional and Riparian Reserves and would not leave enough trees for late-successional habitat development. Related to this concern has been the public's desire to leave more variable densities after harvest within each forest stand.

Consideration Given: In considering this concern, BLM has reviewed the purpose and need to accelerate the development of late-successional habitat. The analysis showed that northern spotted owls infrequently use the larger blocks of dense mid seral forests. It also showed that thinning these stands to lower densities would achieve multiple layered canopies and other late-successional characteristics more quickly. An alternative was considered that would have thinned the majority of the mid seral Late Successional Reserves throughout the project area to low densities. This alternative differed from Alternative 3 in that

more acres would have been thinned to low densities. Specifically, the Rader Wolf and Cougar subwatersheds were included in this alternative, which contain a large proportion of late successional habitat and NSO nest sites in adjacent late-successional forest stands. However, due to the smaller size of these mid seral stands and their proximity to existing late successional habitat, on the ground logistics of implementing a low density prescription would not have been practical without potentially affecting the integrity of adjacent suitable habitat. This alternative was therefore dropped from consideration. The need for more quickly creating late-successional type habitat in the larger blocks of mid seral forest stands remained. The need for variable densities within stands was considered and resulted in the following adjustments.

Adjustments Made: The application of low residual density thinning would be guided by project design criteria to meet long-term late-successional habitat and stand variability. Examples of what would create variable stand density and reduce the amount of low residual density thinning include:

- No harvest buffers or high residual density thinning will be placed adjacent to contiguous blocks of existing late-successional habitat that are outside the harvest boundaries. No harvest means that some trees may be felled in these areas to create or enhance habitat but trees will not be commercially removed.
- One hundred foot no harvest buffers will be placed around fish bearing streams
- Variable no harvest buffers will be placed around non-fish bearing streams
- No harvest buffers or high residual density thinning will be placed around areas of slope instability and around special habitat areas.
- Prescriptions for tree marking will be designed to create variable spacing of remaining trees. Examples include occasionally leaving clumps of trees and clearing around large limbed trees, and varying the spacing to select a tree of particular species and/or growth form.

Snags and Coarse Woody Debris

Public comments were received that expressed concern about the amount of snags and coarse wood left after harvest is completed.

Consideration Given: The South Coast-Northern Klamath Late-Successional Reserve Assessment (LSRA) was reviewed. In reviewing the LSRA, the purpose of snags and coarse woody debris in the short and long-term development of late-successional habitat was considered. Language in this Decision clarifies what would be done to retain and create snags and coarse woody debris.

Adjustments Made:
Within Late-Successional and Riparian Reserves, snags will be retained or created in the following manner in accordance with the LSRA guidance:

- Snags greater than 20 inches DBH and 16 feet tall will be located and counted on a stand-by-stand basis.
- Tree marking will be designed to protect existing snags to the extent possible.
- Those that pose a safety concern will be cut and left for coarse woody debris (CWD).
- If there are less than three snags on north slopes and one snag on south slopes, snags will be created from the larger diameter class of existing live trees to meet the minimum interim needs.

Within Late-Successional and Riparian Reserves, CWD will be retained or created in the following manner in accordance with the LSRA guidance:

- All existing CWD will be retained.
- Approximately two trees per acre will be felled for additional CWD.

New Road Construction Overall Effects

Public comments were received that expressed concern about new roads and their impact to hydrology, weed dispersal, landslide risk, and sedimentation.

Consideration Given: An alternative was considered with no new road construction. A SEDMODL comparison of no new road construction compared to the road construction in Alternatives 2 and 3 showed that there was only a 1% analytical difference in sediment delivery rates to streams. For road planning the RMP, page 130, gives the objective: "To plan road systems in a manner that meets resource objectives and minimizes resource damage." The LSRA, page 95, also gives a road management guideline to, "Avoid construction of new roads or upgrading of naturally closed roads through large contiguous stands unless there are no feasible alternatives." These objectives do not preclude road construction but seek to balance the resource and implementation needs. The timber sale planner in coordination with the other interdisciplinary team members developed a combination helicopter, cable and ground based logging plan that is practically feasible and meets the RMP objectives. It also meets the need of being cost effective. The project design criteria for new road construction prevent impacts to hydrology, weed dispersal, landslide risk, and sedimentation.

Adjustments Made: No adjustments have been made other than those described above.

New Road Construction Effects on Habitat Fragmentation

Public comments were received that expressed concern about how new roads fragment late-successional habitat.

Consideration Given: Analysis showed that fragmentation of late-successional habitat would be very small in comparison to the total project area. Short-term

effects of new roads to threatened and endangered species was considered in the EA and mitigated with project design criteria.

Adjustments Made: No adjustments have been made other than those described above.

Effects of Off-Highway Vehicles in the Watershed

Public comments were received that expressed concern about roads and trails used by off-highway vehicles and their effects to aquatic habitat. Concern was raised that their cumulative effects were not considered.

Consideration Given: BLM addressed these concerns at the beginning of the EA planning process. Some of the roads identified for improvement or decommissioning coincide with off-highway vehicle use. A concerted effort is underway to identify all trail use in the Hubbard Creek subwatershed. It was determined that developing alternatives for recreational off-highway vehicle use would be better met with a separate EA. Baseline information about sedimentation rates, including the roads in Hubbard Creek currently being used by off-highway vehicles, was considered in this analysis. For the EA and this decision, some road improvements coincide with off-highway vehicle use. Improvement of these roads is expected to decrease sedimentation.

Adjustments Made: No adjustment has been made to the decision.

Patch Opening Size

Public comments were received that expressed concern about creating patch openings in Late Successional and Riparian Reserves greater than one-quarter acre as recommended in the LSRA.

Consideration Given: In considering this concern, the LSRA guidance was reviewed as well as recent research about patch size openings in old growth forests. As per the guidance from the LSRA, the maximum patch opening size within Late-Successional and Riparian Reserves would be one-quarter acre. If research shows that larger patch openings are more in line with late-successional forest habitat, then exemptions to the one-quarter acre limit would be sought through the proper administrative channels. A recent review has shown that patch openings in late-successional forests average about one acre and range between one-quarter and two acres in size (pers. comm. Chris Langdon). The LSRA is considered guidance to be supplemented by research. Seeking exemptions to the guidance in line with research is appropriate for activities in Late-Successional and Riparian Reserves.

Adjustments Made: No adjustment has been made to the decision. Most applications of patch openings will not exceed the one-quarter acre size. However an exemption will be sought through the Regional Ecosystem Office if project design of any thinning seeks patch-opening sizes that are greater than one-quarter acre.

Noxious Weeds

The presence and spread of noxious weeds has been expressed as a concern in public comments received for this EA.

Consideration Given: The EA addressed this concern through the application of project design criteria to prevent the spread of noxious weeds as well as pre-project surveys to locate and treat noxious weed infestations.

Adjustments Made: No adjustment has been made to the decision.

SECTION 2 – THE DECISION

Introduction

It is my decision to authorize the implementation of a scaled back version of Alternative 3. This decision is in two parts:

1) Watershed enhancement related projects (Map #1) are approved subject to botanical surveys. It is expected that these projects will be implemented over the course of the next decade, subject to available funding. **Accomplishment of these projects will be reported through the Annual Program Summary.**

2) Density management harvest activities (Map #2) will be implemented over the course of the next decade as individual sale unit decisions subject to administrative remedy under 43 CFR 5003.2 and 5003.3. **The public will receive notice of pending decisions through the District Quarterly Planning Update in the quarter preceding the planned sale.** Specific harvest unit locations and mitigating measures for specific programs, including special status species, will be incorporated and made available to the public at that time.

Decision Part 1:

Watershed Enhancements - For watershed enhancements (Map #1) the following actions will be implemented:

- An estimated 52 miles of road will be improved
- An estimated 4 miles of road will be decommissioned
- Approximately 26 fish barrier culverts will be replaced or removed
- Approximately 15 miles of instream aquatic habitat will be enhanced.
- Three existing developed quarries would be used to furnish rock for instream enhancement and for road improvements.

Decision Part 2:

Density Management Harvest Activities - For the harvest related actions (Map #2), the total project area is approximately 9,000 acres. As a result of the following project design criteria, the amount of unthinned area within the total project will be between 1,000 to 2,000 acres. The amount of unthinned area from unit to unit will vary as project design criteria are applied to each unique situation. Within Connectivity/Diversity Block, Late-Successional and Riparian Reserves the following criteria will also create variable stand density:

- Unthinned areas and varied densities within harvest units
  - No harvest buffers or high residual density thinning will be placed adjacent to contiguous blocks of existing late-successional habitat that are outside the harvest boundaries.
  - One hundred foot no harvest buffers will be placed around fish bearing streams. **No harvest means that some trees may be felled in these areas to create or enhance habitat but trees will not be commercially removed.**
  - Variable no harvest buffers will be placed around non-fish bearing streams
  - No harvest buffers or high residual density thinning will be placed around areas of slope instability and special habitat areas.
  - Prescriptions for tree marking will be designed to create variable spacing of remaining trees and protection of existing snags to the extent possible. Examples include occasionally leaving clumps of trees and clearing around large limbed trees, and varying the spacing to select a tree of particular species and/or growth form.

- The following thinning prescriptions (Table 1) will be applied by land use allocation across the project area in accordance with Map #2.

Table 1 Upper Umpqua Thinning Density Acreage

Land Use Allocation and Harvest Density	Estimated Acres[1]
Connectivity/Diversity Block, Late-Successional & Riparian Reserves Moderate Residual Density	4,800
Connectivity/Diversity Block, Late-Successional & Riparian Reserves Low Residual Density	2,350
General Forest Management Area and Connectivity/Diversity Block High Residual Density	850
TOTAL	8,000

[1] Unit boundaries from Map #2 may vary by approximately ten percent as specific harvest units are further developed at the site level.

- The following harvest methods (Table 2) will be applied across the project area:

Table 2 Upper Umpqua Harvest Method Acreage

Harvest Method	Estimated Acreage[2]
Helicopter	1,500
Cable	6,000
Ground Based	500
TOTAL	8,000

[2] Unit boundaries may vary by approximately ten percent as specific harvest units are further developed at the site level.

- Approximately 240 miles of road would be used for timber haul.
- Approximately six miles of new permanent road and approximately eleven miles of temporary road would be constructed. Road miles are expected to vary by approximately 20 percent when implemented in the field.
- Approximately five culverts with small water impoundments would be maintained for fire suppression use.
- Three existing developed quarries would be used to furnish rock for road improvements and construction.
- Up to 400 acres of landing and piled slash would be burned.
- Within approximately 85 acres of hardwood dominated riparian areas existing conifers would be released by cutting or girdling surrounding hardwoods and harvesting selected hardwood patches for underplanting with conifers.
- Within Late-Successional and Riparian Reserves, snags will be retained or created in the following manner in accordance with the LSRA guidance:
  - Snags greater than 20 inches DBH and 16 feet tall will be located and counted on a stand-by-stand basis.
  - Tree marking will be designed to protect existing snags to the extent possible.
  - Those that pose a safety concern will be cut and left for coarse woody debris (CWD).
  - If there are less than three snags on north slopes and one snag on south slopes, snags will be created on a per acre basis from the larger diameter class of existing live trees to meet the minimum interim needs.
- Within Late-Successional and Riparian Reserves, CWD will be retained or created in the following manner in accordance with the LSRA guidance:
  - All existing CWD will be retained.
  - Approximately two trees per acre will be felled for additional CWD.

Project Design Criteria

The following project design criteria (PDCs) and best management practices (BMPs) are adopted as part of implementing this decision to reduce adverse environmental

impacts. They are designed to avoid, minimize or rectify impacts on resources. These measures will also help projects meet the objectives of the Aquatic Conservation Strategy.

Seasonal Restriction PDCs Mitigating Overall Effects

Seasonal restrictions will apply based on consultation criteria to reduce impacts to federally listed species. Seasonal restrictions in accordance with BMPs will also be applied to reduce sedimentation impacts to aquatic species and to reduce soil compaction in order to maintain soil productivity. These restrictions are described below.

PDCs Mitigating Effects to Wildlife Threatened & Endangered Species

The following PDCs are from the Programmatic Biological Opinion for the Roseburg District 2003-2008 (Ref. No. 1-15-03-F-160) as they apply to this Upper Umpqua Watershed Plan Decision.

- Bald Eagle

  Disturbance

  - No disturbance above ambient noise levels will occur within 0.25 miles of known bald eagle nest between February 15 and August 31 or until non-nesting is determined. Blasting projects will incorporate 1-mile buffers around active nest sites.

  Habitat

  - No suitable habitat will be removed within 500 meters of known nests and/or habitat identified as critical roosting or foraging areas between January 1 and August 31 (the exception to this PDC is the removal of hazard trees).
- Northern Spotted Owl

  Disturbance

  - Activities will be scheduled to avoid implementing projects within 0.25 miles of any known nest site or activity center from March 1- June 30, unless protocol surveys have determined the activity center to be not occupied, non-nesting, or failed in their nesting attempt. Waiver of the seasonal restriction will be valid until March 1 of the following year.
  - Prescribed burn plans scheduled during the nesting season and which would burn within 0.25 miles of known nest sites or activity centers will be designed to reduce or avoid disturbance and smoke impacts.
  - No blasting will occur within 1 mile of all occupied and unsurveyed, suitable habitat between March 1 and June 30.

  Habitat

  - For projects that remove habitat, work activities such as tree felling, yarding, etc, will not occur within 0.25 miles of any known nest site or activity center from March 1- September 30, unless protocol surveys have determined the activity center to be not occupied, non-nesting, or failed in a nesting attempt. Waiver of the seasonal restriction will be valid until March 1 of the following year.

- Marbled Murrelet

  Disturbance

  - Within the 35-mile zone, schedule the implementation of projects within 0.25 mile of all occupied or unsurveyed, suitable habitat outside of the critical nesting period (April 1 – August 5). Daily Operating Restrictions (operation of activities must occur between two hours after sunrise and two hours before sunset) will be applied between August 6 and September 15.
  - Within the 35 to 50 mile zone, Daily Operating Restrictions will apply when projects occur within 0.25 mile of all occupied and unsurveyed, suitable habitat from April 1 until August 5.
  - No blasting will occur within one mile of all occupied and unsurveyed, suitable habitat between April 1 and September 15.

  Habitat

  - If surveys have not been completed, projects will not remove or modify suitable habitat. Residual trees and adjacent suitable habitat will be buffered with no harvest or low residual density thinning prescriptions to avoid modification of suitable habitat and to protect the integrity of the existing suitable habitat. The following further clarifies how this will be implemented on the ground: To ensure that marbled murrelet suitable habitat will not be modified during stand treatment and the integrity of existing suitable habitat will remain intact, treatment prescriptions for those stands with residuals and adjacent habitat will be evaluated to consider site conditions. Design features will take into consideration topography, aspect, site growing conditions, and local wind patterns. Design criteria for maintaining suitable habitat conditions include:
    - Mid seral stands adjacent to suitable habitat will be treated to maintain interlocking canopies.
    - Residual trees within mid seral stands will be evaluated on the ground to determine its relationship with the surrounding stand. Adjacent trees that directly contribute to the microsite conditions of suitable nest structures will be maintained.
  - Projects that remove or modify suitable habitat will have two years of surveys (Pacific Seabird Group, Marbled Murrelet Survey Protocol 2003) completed to document presence/absence of murrelet occupation. If it is not feasible to complete the two-year protocol, the US Fish and Wildlife Service will be contacted on a case-by-case basis to discuss other means of insuring potential nest trees are not impacted.
  - If project areas are within 0.25 miles of occupied or unsurveyed suitable habitat, on District land, removal of suitable habitat that might disturb nesting will not occur between April 1 and September 15. All stands previously documented as being occupied will be assumed to be occupied.
  - For unsurveyed tree felling/lining projects for instream enhancement, trees selected for falling/lining will meet the following criteria:

1) selected trees will be free from a large amount of rot;
2) trees will not be selected that are capable of providing nesting structure or provide protection for trees containing suitable nesting structure for the marbled murrelet or northern spotted owl;
3) if pre-disturbance surveys are not conducted then seasonal/daily operating restrictions will be applied.

PDCs Mitigating Erosion and Sedimentation Effects to Aquatic Species

- To protect aquatic resources within Riparian Reserves a variable width streamside no-harvest buffer will be established along all streams. In general, the buffer width is expected to average 40 feet from the outer edge of the active stream channel for all non-fish bearing streams and will be a minimum of 100 feet from the outer edge of the active stream channel for all fish bearing streams. The buffer width could be expanded to include areas of instability, wide areas of riparian vegetation, or sensitive areas identified during site review. Likewise, the buffer width could decrease along some non-fish bearing streams when certain conditions as described below are met. Variation in the non-fish bearing stream buffer will be based on site level review of soils, hydrology, fisheries, vegetation, and riparian habitat. Specifically, soils will be reviewed for the presence or absence of steep slopes, potential erosion, sedimentation, and soil displacement issues; hydrology will be reviewed for overland and groundwater flow conditions (perennial, seasonal, ephemeral classification, wetlands, seeps, and springs); fisheries will be reviewed for the influence non-fish bearing streams have on downstream aquatic habitat; vegetation will be reviewed for diversity and crown characteristics (ground cover, vegetative composition, stream shading, etc); riparian habitat will be reviewed for the presence of key habitat components (aspect, vegetative composition and structure, snags, downed wood, etc). At the very minimum, a one-tree retention will be maintained along the stream bank for bank stability. Minimum buffer widths will be used primarily on first or second order, ephemeral or highly interrupted intermittent streams, which lack riparian vegetation and where riparian habitat components, soil stability issues, and potential impact to downstream fisheries are also absent. Management within the buffer could include selected felling and/or girdling of trees where doing so will benefit riparian habitat. Trees will not be commercially removed from this buffer area. Use of the buffer will provide the following benefits:
  - Maintain canopy cover for stream shading
  - Maintain a non-disturbed vegetative filter for sedimentation
  - Provide protection to the stream channel and banks
  - Trees treated or felled in this zone will have riparian habitat benefits
- Extra trees will be retained outside of the no-harvest buffers where landslides or debris flows are most likely to initiate, particularly those that could impact streams, ponds, and wetlands.
- Stream channels and riparian habitat will be protected from logging damage by directionally felling trees that are within 100' of streams generally away from the streams and yarding logs away from or parallel to the streams. In isolated cases

where logs need to be yarded across streams, logs will be fully suspended over the stream to avoid any ground disturbance within and immediately adjacent to the stream channel and banks. Yarding corridors parallel to non-fish bearing streams must be at least 40 feet way from the edge of the active stream channel (100 feet for fish bearing streams) and will be avoided along swale bottoms.

- Skyline yarding will be required where cable logging is specified. This method will limit ground disturbance by requiring at least partial suspension during yarding. In some limited, isolated areas partial suspension (outside no-harvest buffers) may not be physically possible due to terrain or lateral yarding. Excessive soil furrowing will be waterbarred and covered with slash. For all cable yarding, corridors generally less than 15 feet in width will be utilized.

New Road Construction and Road Use PDCs

- **Temporary New Roads** – These roads include all road construction in Late-Successional and Riparian Reserves. They will be available for use during the commercial harvesting contract. These roads will be decommissioned for hydrological purposes upon completion of the harvesting contract.
- **Permanent New Roads** – These roads include all road construction through private lands as well as on GFMA and Connectivity/Diversity Block lands. They will be available for use during the commercial harvesting contract as well as after its completion. Some of these roads may be closed after harvest is completed.
- The majority of new road construction will be located away from streams and do not present sedimentation risks. New road construction generally will be located on ridge tops and stable slopes that do not exceed 50 percent. All new road construction would occur during dry periods of the year, generally between May 15 and the onset of regular fall rains or as determined by weather patterns.
- Erosion control measures (waterbarring, seeding, mulching, straw bales, bioengineering, etc.) will be applied where needed on newly constructed roads, improved roads, or decommissioned roads where they are within 200 feet of streams, on replaced or removed culverts, and on access trails constructed for instream large wood and boulder placements.
- All permanent new road construction that remains open to traffic will be rocked. Prior to the wet season, all new road construction not surfaced with rock will be waterbarred and blocked to traffic during the same dry season as construction.
- Over wintering an unsurfaced road for use the following dry season will be allowed in limited cases when the unit size and degree of seasonal restrictions make completing harvest within one dry season impractical. Over wintering roads will also require at a minimum waterbarring and blocking to traffic and could include other measures listed above.
- All haul routes used during wet season hauling will be inspected prior to haul activities to assess the current conditions of those roads as they pertain to sedimentation concerns to adjacent streams. In instances where winter haul would occur along a gravel route with defined stream crossings, project design

criteria will specify sediment fences, gravel lifts, and weather dependant operation specifications designed to prevent sediment contribution to live streams. Activities will be suspended when conditions are such that stream sedimentation will occur. The suspension will be lifted when conditions improve or remediation measures are implemented.

PDCs Mitigating Soil Compaction

- Conduct ground-based operations only when soil moisture conditions limit effects to soil productivity (these conditions generally occur between May 15 and the onset of regular fall rains or may be determined by on-site examination).
- No ground-based yarding will occur within the no-harvest buffer. Crossing stream channels with equipment will be limited to existing roads.
- The arterial trails of Harvester-Forwarder operations will be designated. Harvesters will delimb trees in front of the machine tracks or tires in order to reduce compaction. The forwarder will operate on the branch and limb covered areas traversed by the harvester.
- Skid trails will be designated for tractor yarding and spaced at least 150 feet apart on average. Trees will be felled to lead in relation to the designated skid trails.
- Total newly created main skid trails, landings, and large pile areas will affect less than approximately 10 percent of the ground-based harvest unit. A main skid trail is defined as a trail in which the duff and slash is displaced such that approximately 50 percent or more of the surface area of the trail is exposed to mineral soil.
- Skid trails, which were created prior to the adoption of the RMP, will be re-used to the extent practical, such skid trails that are re-used will be included in the 10 percent limit of affected area within the ground-based harvest unit.
- Skid trails will be limited to slopes generally less than 35 percent.
- Since these are intermediate harvest entries, all skid trails will be ameliorated where possible or a plan will be documented so that amelioration may be accomplished at the time of regeneration harvest on GFMA and Connectivity/Diversity Block lands.
- Potential harvest units will be examined during the planning process to determine if skid trails created prior to the adoption of the RMP have resulted in compaction extensive enough to warrant amelioration.
- Amelioration of skid trails will generally consist of tilling with equipment designed to reduce the effects to soil productivity from compaction and changes in soil structure.
- Trails resulting from ground-based yarding will be waterbarred and covered with slash as necessary to limit erosion and prevent sedimentation into streams.
- For instream large wood and boulder enhancement activities, excavators will be restricted to designated skid trails as identified in an approved plan. Machines will be limited in size and track width to reduce compaction and trail width. As described above for harvesting, tilling of skid trails will be evaluated.

Noxious Weeds PDCs

- Project level weed surveys and watershed level weed inventories will be performed;
- Prior to ground disturbance, existing weed infestation(s) at proposed project site(s) will be treated;
- Construction and logging equipment/machinery associated with ground disturbance will be adequately cleaned prior to moving into the proposed project site(s) to control or prevent the spread of noxious weed seed;
- The area(s) of ground disturbance will be reseeded with native grass seed or a suitable alternative in a timely fashion following ground disturbance;
- Noxious weed infestations and reseeding results at project sites will be monitored following ground disturbance.

Kincaid's Lupine PDCs

- Project level surveys for Kincaid's lupine will be performed at the time of year that the species can be detected (generally from April through June);
- If these surveys locate additional populations of Kincaid's lupine, the projects will be modified to avoid effects to the plants and their habitat. If a project cannot be modified to produce a no effect determination, consultation will be reinitiated with the FWS.

Miscellaneous PDCs

- **Hazardous materials** (particularly petroleum products) will be stored in durable containers and located so that any accidental spill will be contained. All landing and work site trash and logging materials will be removed. All equipment planned for instream work will be inspected beforehand for leaks. Accidental spills or discovery of the dumping of any hazardous materials will be reported to the Sale Administrator and the procedures outlined in the "Roseburg District Hazardous Materials (HAZMAT) Emergency Response Contingency Plan" will be followed.
- **Cultural resource** clearances will be conducted for all ground-disturbing projects. Appropriate mitigation or evaluation measures will be implemented on known cultural resource sites. Stipulations will be placed in contracts to halt operations in the event of inadvertent discoveries of new cultural resource sites (e.g. historical or prehistorical ruins, graves, fossils or artifacts).

Conditions on Decision – Clearances and Consultation Needed

This decision is conditional upon certain clearances or consultation being conducted prior to implementation of ground-disturbing activities.

Watershed Enhancements

Wildlife and botanical clearances will be necessary prior to implementation of ground disturbing watershed enhancement projects. Clearances would be in accordance with guidelines set forth in Bureau Manual 6840, and the *Record of Decision and Standards and Guidelines for Amendments to the Survey and Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines (USDA/USDI, 2001).* Special status sites discovered as a result of clearances or pre-disturbance surveys would be managed in full conformance with Special Status Species policy.

Harvest Activities

The following clearances and consultation will be necessary prior to implementing harvest activities:

- Wildlife and botanical clearances as described for **Watershed Enhancements**
- Cultural clearances
- Consultation with National Oceanic and Atmospheric Administration (NOAA-Fisheries)

Rationale

The **No Action** alternative was not adopted because it would not meet the purpose and need as outlined in the EA (pgs. 1-2) to accelerate stand development of late-successional characteristics, to contribute timber for the local and regional economy, to reduce fine sediment input into streams and improve aquatic habitat. Project-by-project planning and NEPA documentation would not implement projects in a cost effective manner.

Although Alternative 2 would meet much of the purpose and need, it was not adopted because the amount of moderate residual density thinning would limit the variability across the landscape. Moderate residual density thinning will require a greater number of future thinnings to develop habitat for late-successional associated species. It would also take longer to develop late-successional habitat.

The adoption of a scaled back version of Alternative 3 better meets the purpose and need and provides a broader range of management options than Alternative 2 to accomplish the goals of the EA. This alternative provides greater variability across the landscape than Alternative 2 since a larger amount of low residual density thinning will be applied. The stands designated for low residual density thinning will also have a greater amount of variability within each stand than the Alternative 3 described in the EA because of the application of the project design criteria described on page 8-9. Where low residual density thinning is applied, late-successional characteristics will develop more quickly which will in turn allow more frequent use by northern spotted owls.

For the watershed enhancement projects, cultural clearances have been completed according to protocol. No consultation was required.

For watershed enhancement projects, consultation with the NOAA-Fish has been completed. Among other things this Biological Opinion covers Road Maintenance and Aquatic and Riparian Habitat Projects. The Biological Opinion (October 18, 2002) concurred that these activities are "not likely to jeopardize" coho. Consultation will be reinitiated after 5 years.

Consultation with the U.S. Fish and Wildlife Service has been completed covering all projects listed in this decision. The programmatic Biological Opinion (February 21, 2003) concluded that the action is " . . . not likely to jeopardize the continued existence of the spotted owl, murrelet, or bald eagle, and are not likely to adversely modify spotted owl or murrelet critical habitat". Consultation will be reinitiated after 5 years or when certain thresholds have been reached.

This decision is based on the fact that the actions implement the Standards and Guidelines (S&Gs) as stated in the NFP and the Management Actions / Directions of the RMP. The project design criteria listed above will minimize soil compaction, limit erosion, protect slope stability, wildlife, air, water quality, and fish habitat, as well as protect other identified resource values. This decision recognizes that impacts could occur to some of these resources, however, the impacts to resource values will not exceed those identified in the *Final - Roseburg District Proposed Resource Management Plan / Environmental Impact Statement* (PRMP/EIS). The Decision provides timber commodities with impacts to the environment at a level within those anticipated in the RMP/EIS.

I have reviewed the public comments on the EA. I have provided additional time for interested parties to develop input and to participate in a field tour of the project area. This interactive participation has resulted in substantive adjustments in the proposed action initially presented in the EA.

This decision incorporates the following harvest activity changes from what was described for Alternatives 2 and 3 (see Map #2). None of these changes alter the analysis or conclusions of the EA.

1. Approximately 120 acres of GFMA forests in the 50 to 80 year age class will be dropped from consideration for thinning under this EA.

2. Approximately 500 acres in Late Successional and Riparian Reserve forests are dropped from consideration for thinning for the following reasons:
    - Mid seral forest stands that are currently exhibiting late-successional type characteristics were evaluated and dropped from consideration because density management would not meet the purpose of, "accelerat[ing] stand diversity and development of late-successional characteristics …".
    - Some mapping errors that included larger blocks of late-successional forest types instead of mid seral forest types have been corrected. Mapping errors will continue to be corrected, as unit boundaries are refined in the field.

- The control area for the Little Wolf Density Management Study will not be harvested to allow for continuation of the long-term study.

Approximately one mile of new road construction was dropped from consideration when these harvest units were dropped.

3. Within the Connectivity/Diversity Block, Late Successional and Riparian Reserves, the estimated amount of low residual density thinning is lower than Alternatives 3. The placement of unthinned buffers and high and moderate residual density thinning for reasons described above provide variability within these stands. Map #2 shows the general locations of low residual density thinning. Unit design and within stand densities will be guided by the project design criteria to meet long-term late-successional habitat and stand variability objectives.

4. The project design criteria in the EA on page B-3 referenced pages from the Late-Successional Reserve Assessment, Oregon Coast Province-Southern Portion – RO267, RO268. This document, however, does not apply to the project area. The application of snags and CWD retention and creation should have referred to the South Coast Northern Klamath LSRA. This decision corrects that reference and the changes are reflected in the descriptions of how snags and CWD will be retained and created within Late-Successional and Riparian Reserves.

As a result of this decision, actions will be undertaken to repair, restore, or upgrade many existing structures and developments in the watershed. On-the-ground results of many of these actions are expected to be seen in a relatively short time frame.

In contrast, the thinning actions that will be undertaken to accomplish terrestrial habitat objectives are only initial steps in a very long-term process. These actions set management of the affected blocks of land on a trajectory, the final outcome of which is not absolutely certain. This is an integral aspect of the adaptive management concept built into the Northwest Forest Plan and the Roseburg Resource Management Plan. This decision addresses only the initial steps in this long-term process. It is fully expected that additional silvicultural treatments of the affected stands will be required at some point in the future. However, this decision neither determines the nature of those future actions, nor places constraints on them.

Compliance and Monitoring

Monitoring will be conducted as per the direction given in the RMP (Appendix I).

Protest Procedures

As outlined in 43 CFR § 5003 Administrative Remedies, the watershed enhancement projects (Map #1) may be protested at this time. Protests may be filed with the authorized officer within 15 days of the publication date of the Notice of Decision in the News Review. Protests shall be filed with the authorized officer (Jay K. Carlson) and shall contain a written statement of reasons for protesting the decision and specifically state which portion or element of the decision is being protested and cite applicable Code of Federal Regulations (CFR) pertinent to the point(s) of protest. Protests received more than 15 days after the publication of the Notice of Decision are not timely filed and shall not be considered. Upon timely filing of a protest, the authorized officer shall reconsider the decision to be implemented in light of the statement of reasons for the protest and other pertinent information available to him. The authorized officer shall, at the conclusion of his review, serve his decision in writing to the protesting party. Upon denial of a protest the authorized officer may proceed with the implementation of the decision.

Forest Management Regulation 43 CFR 5003.2 states that "[w]hen a decision is made to conduct an advertised timber sale, the notice of such sale shall constitute the decision document." This decision does not include the advertisement of any timber sales. The specific timber sale notices will be placed in *The News Review* at the time of advertisement and an opportunity to protest will be provided at that time.

For further information, contact Jay K. Carlson, Field Manager, Swiftwater Field Office, Roseburg District, Bureau of Land Management, 777 NW Garden Valley Blvd; Roseburg, OR. 97470, 541 440-4931.

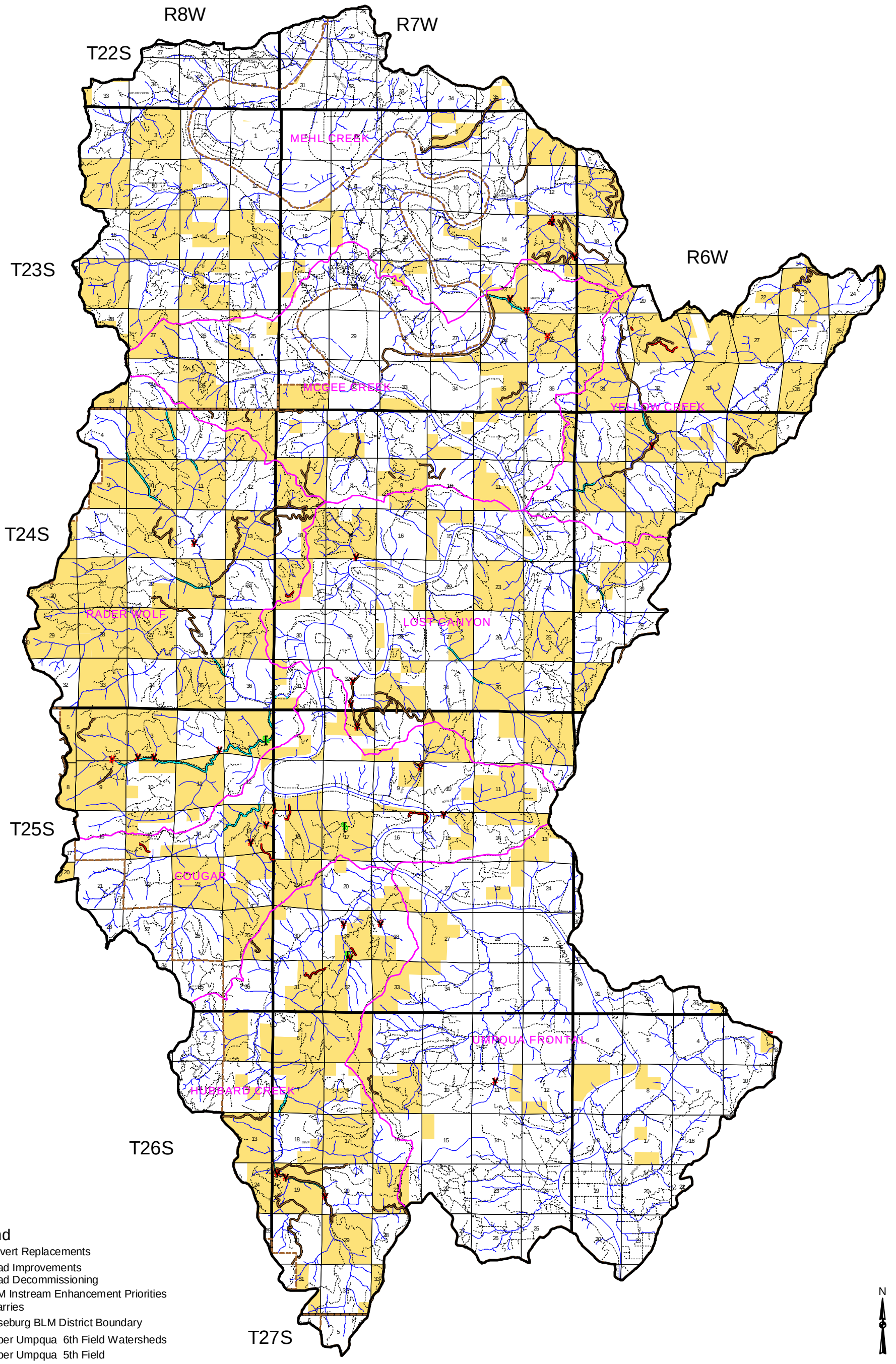
Finding Of No Significant Impact

I have reviewed this environmental assessment including the Project Design Criteria designed to mitigate any potentially significant environmental impacts. I have determined that the proposed action with the mitigation measures described herein will not have any significant impacts on the human environment and does not constitute a major federal action therefore an Environmental Impact Statement does not need to be prepared. In accordance with the Standards and Guidelines (S&G's, pg. B-10) I find that "the proposed activity is consistent with the Aquatic Conservation Strategy objectives" and "meets" or "does not prevent attainment" of these objectives. I have determined that the proposed project is in conformance with the approved land use plan. It is my decision to implement the project with the mitigation measures previously described.

_____ _____

Jay K. Carlson, Field Manager — Date
Swiftwater Field Office

Map #1 - Upper Umpqua Watershed Enhancements - Roads, Culverts and Instream



9/30/03

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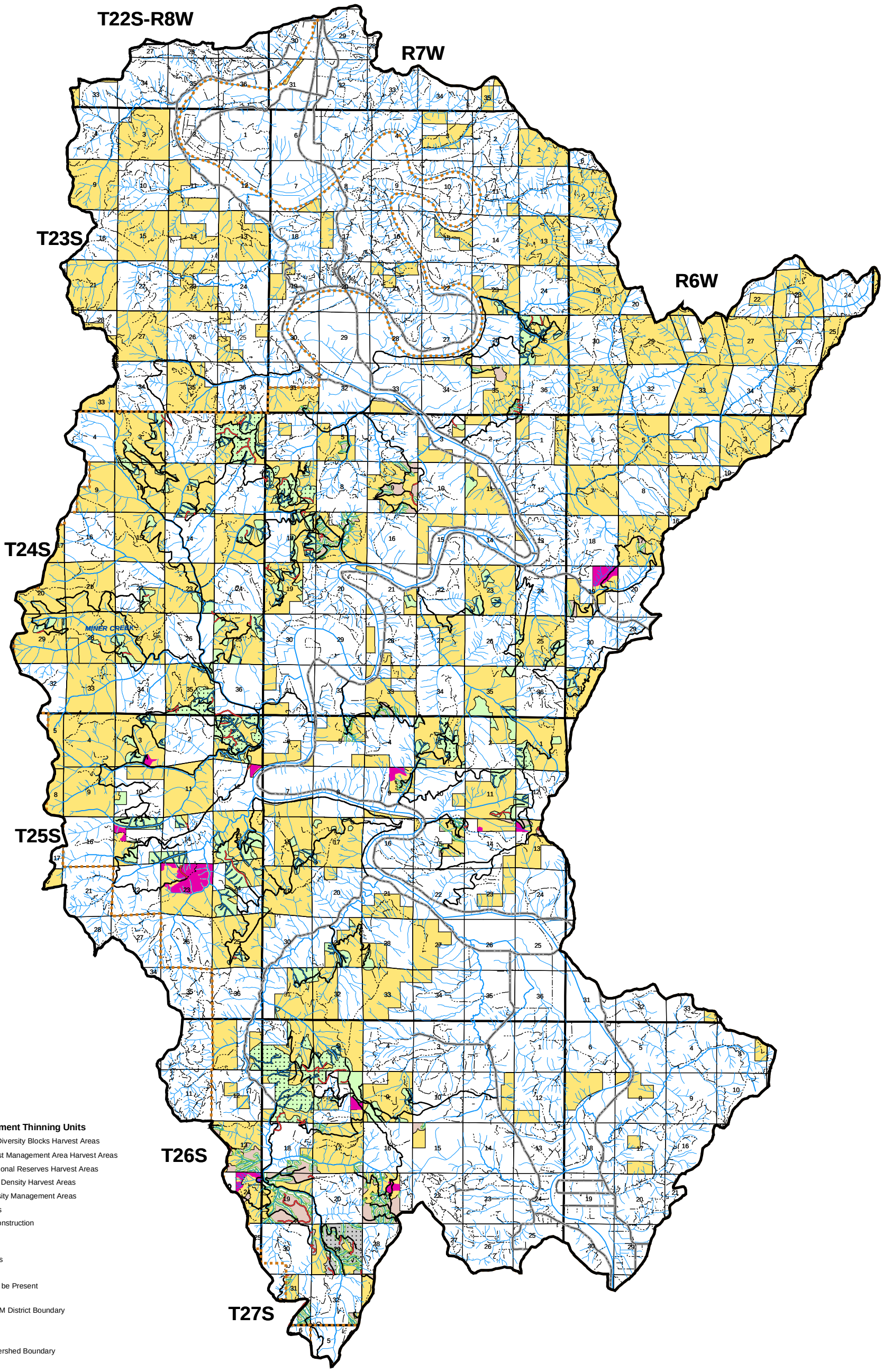
Map #2 - Upper Umpqua Density Management and Commercial Thin Proposed Units



Legend

Density Management Thinning Units

- Connectivity/Diversity Blocks Harvest Areas
- General Forest Management Area Harvest Areas
- Late Successional Reserves Harvest Areas
- Low Residual Density Harvest Areas
- Riparian Density Management Areas
- Dropped Units
- New Road Construction
- Haul Route
- Roads
- County Roads

Fish Presence

- Not Known to be Present
- Expected
- Roseburg BLM District Boundary
- Sections
- T-R
- 5th Field Watershed Boundary
- BLM Lands

United States Department of the Interior
Bureau of Land Management

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Miles

9/30/03