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SUMMARY**SUMMARY**

CHAPTER 1 – PURPOSE AND NEED FOR ACTION

The purpose of this project is to implement recommendations that stemmed from the Diamond Lake/Lemolo Lake Watershed Analysis (WA). Goals and objectives of the Umpqua National Forest Land Resource Management Plan (LRMP), as amended by the Northwest Forest Plan ROD are achieved through implementation of WA recommendations. The District Ranger and the Diamond Lake Ranger District staff are responsible for implementing watershed analysis recommendations and achieving Forest Plan goals and objectives.

There is a need to achieve the desired conditions outlined in Chapter Five of the Diamond Lake/Lemolo Lake Watershed Analysis by implementing the WA recommendations within the Lemolo Analysis Area, including the Bunker Hill area. In order to achieve desired conditions the project needs to:

- Maintain the high level of vegetative diversity in both structure and pattern, promote pine health, and improve stand health and vigor by approximating natural disturbance processes and patterns through silvicultural harvest prescriptions that are varied over the Lemolo Lake Watershed landscape. At landscape levels, a mix of treatment intensities makes sense; no treatment on some areas, less intensive treatment on other areas, and more intensive treatment involving reduction of canopy density in still other areas (Agee 2002). To meet this desired condition, there is a site specific need to harvest areas adjacent to or within close proximity to managed stands (plantations) using shelterwood (8-12 live leave trees per acre) and seed tree (4-6 live leave trees per acre) prescriptions, under the 15% green-tree retention Forest Plan Standard and Guideline. This will approximate larger scale disturbance processes such as stand replacement fire. There is a site specific need to commercially thin areas in order to approximate disturbances such as light ground fire and occasional insect attacks, non- stand replacing events. There is also a site specific need to approximate disturbances such as light ground fire and small, localized disturbance such as root disease and concentrated insect attack. This can be achieved through partial harvest and small group harvest of less than 5 acres.
- Move the Lemolo Lake Watershed from a high severity fire regime towards the historical moderate severity fire regime. The WA states, “Design timber sales to approximate fires natural disturbance at the stand and landscape scale, and help return the watershed to a moderate fire regime”. It also states that “Once harvest is complete prescribed fire will be used to treat activity created fuel as well as being reintroduced to areas which were not harvested within the sale area. In order to meet this general desired condition, there is a site specific need to do silvicultural treatments that approximate natural disturbance processes, treat slash from proposed harvest activity, and underburn and hand pile slash within natural stands which have been classified as fuel model 8 through fuel model 10.

Historically low and moderate fire regimes are much better candidates for some type of fire safe treatment (Agee 2002). Treatment should focus on surface fuel, ladder fuel, and then crown fuel. (Agee 2002). Reducing these fuels will limit the potential intensity of fires, and provide a higher chance of controlling wildfires, and allow more of the forest to survive when it does burn (Agee 2002).

The best general approach for managing wildfire damage seems to be by managing tree density and species composition with well-designed silvicultural systems at a landscape scale that includes a mix of thinning, surface fuel treatments, and prescribed fire with proactive treatment in areas with high risk to wildfire.

- Bring existing road systems up to current standards and reduce the risk to the aquatic resource from road related erosional processes within the Lemolo Lake Watershed. Reconstruct / maintain the road system and decommission system roads through Knutson-Vandenburg funding opportunities on a site-specific basis.
- Provide miscellaneous forest products (post & poles and house logs) by following the harvest priority recommendations.
- Improve the long-term site productivity of managed stands that have been adversely affected by past management practices. In order to meet this general desired condition, there is a site-specific need to subsoil main skid roads and temporary haul roads in managed stands within the Lemolo analysis area through Knutson-Vandenburg or other funding opportunities.

Achieving the desired conditions outlined in the WA leads to meeting the main objective for Management Area 10/matrix lands: to supply a probable sale quantity (PSQ) of timber to local and regional economies on a cost efficient, sustainable basis. Objectives for matrix lands are described on page B-1 of the ROD. The ROD states “Production of timber and other commodities is an important objective for the matrix.” The ROD also states on page B-2 and B-6 that one of the objectives of matrix lands is to provide ecological diversity at the landscape scale in the form of early-successional habitat through commercial timber harvest. There is a need to conduct timber harvest inside Management Area 10/matrix lands within the Lemolo Analysis Area to meet the PSQ and provide for early successional habitat.

SITE LOCATIONS

The legal description of the project area includes all or portions of sections 24 through 28 and 33 through 36, T25S, R5 1/2E; sections 30, 31 and 32, T25S, R6E; sections 32 through 36, T25 1/2S, R6E; sections 31, 32 and 33, T25 1/2S, R6 1/2E; sections 10 through 15, 22 through 25 and 36, T26S, R5E; sections 1 through 36, T26S, R6E; sections 4 through 9, 15 through 21 and 27 through 35, T26S, R6 1/2E; sections 1, 12 and 13, T27S, R5E; sections 1 through 28 and 33 10, 11 and 12, T28S, R6E, Willamette Meridian, Douglas County, Oregon.

SCOPING - ISSUES IDENTIFICATION

The original scoping period identified one significant issue and concern from members of the public that recreate in the Lemolo Lake area. This issue was labeled “Recreational value in the Lemolo Lake area”, and is discussed in detail below. After the first draft EIS was sent out for a 45-day comment period an additional issue and concern from members of the public was raised relating to the proposed action. This issue revolved around the proposed harvest of old growth habitat within the Lemolo Analysis Area and is also discussed in detail below under the heading “Old Growth Habitat.” These significant issues were based on unresolved conflicts concerning alternative uses of available resources.

John Ouimet District Ranger reviewed all of the issues and determined the significant issues. This approval is documented in a letter signed on March 5th, 2002 and filed in Appendix F of this document.

RECREATIONAL VALUE ISSUE

The 1990 Umpqua National Forest LRMP, as amended, established Forest-wide multiple use goals, objectives and management area requirements as well as management area prescriptions. The immediate area around Lemolo Lake is in Management Area 2 (Concentrated Developed Recreation). The focus is to provide an appropriate environment for concentrated developed recreation activities in areas immediately surrounding Lemolo Lake. All proposed actions fall outside this management area and meet the direction stated in the LRMP, including standards and guidelines for visual quality objectives. Some members of the public expressed concerns of certain actions that were near this area or near other developed recreation sites in the analysis area. Their concern was that timber harvest activities on Bunker Hill and within the vicinity of the Lemolo Lake Recreation Area would adversely affect their recreational experience and personal value for solitude. Specific units at issue within the proposed action include units 1, 2, 3, 4, 5, 7, 9, 14-24, 26, 27, 30, 32-41, 48, 53-56, and 68 and the south portion of unit 25 below the 60 road.

This issue can be framed in the context of “unresolved conflicts concerning alternative uses of available resources.” At issue is whether the timber sale related adverse effects on recreation and solitude outweigh the risk of high intensity fire, the decline of pine health, the reduction of stand health and vigor on Bunker Hill and within the Lemolo watershed, and the need to provide probable sale quantity from matrix lands. Evaluation criteria and environmental effects surrounding the recreational value issue are based on total acres treated to promote pine health on Bunker Hill and within the Lemolo watershed; total acres harvested within areas identified as high recreational value through public comment within the Lemolo watershed, total acres of hazardous fuels treated on Bunker Hill and within the Lemolo watershed, probable sale quantity, and total acres of stand density management (commercial thinning) on Bunker Hill and within the Lemolo watershed.

OLD GROWTH HABITAT ISSUE

The 1990 Umpqua National Forest LRMP, as amended, established Standards and Guidelines relating to late successional/old growth habitat within Fifth Field Watersheds. Standard and Guideline C-44/45 in the Northwest Forest Plan ROD states; “all remaining late-successional stands should be protected when the amount of late-successional habitat within a Fifth level Watershed falls below 15%.” Late-successional habitat is defined as forest greater than 80 years old. Analysis shows that none of the alternatives within this DEIS drop the level of late-successional habitat below 15% of the total area within the Lemolo Fifth Field Watershed, thus meeting the Standard and Guideline. In fact, none of the alternatives drop the level of late-successional habitat below 60% and the level of old growth habitat below 30% of the total area within the Lemolo Watershed.

Even though all alternatives meet the late-successional Standard and Guideline, many members of the public are still concerned about harvesting old growth stands. There are 23,720 acres of old growth stands within the Lemolo Watershed Projects Analysis area, as described in the Northwest Forest Plan (ROD – Glossary F-4). Old growth forest stands are usually at least 180-220 years old with moderate to high canopy closure; a multi-layered, multi-species canopy dominated by large over story trees; high incidence of large trees, some with broken tops and other indications of old and decaying wood (decadence); numerous large snags; and heavy accumulations of wood, including large logs on the ground. Old growth stands have been delineated using the vegetative age class information from the “ump_femat_age” coverage located in the Umpqua GIS reference library. Specific units at issue within the proposed action include; 2, 3, 5, 7, 9, 14-24, 26, 27, 30, 32-34, 36, 37, 40, 41, 68 and associated road construction. At issue is whether to maintain these existing old growth stands at this time or harvest them within matrix lands inside the Lemolo Watershed Projects analysis area under the Northwest Forest Plan. If no harvest of old growth occurs there are tradeoffs related to pine health, probable sale quantity, and fire hazard within the analysis area. The evaluation criteria and environmental effects surrounding the old growth issue are based on the total acres of old growth harvested within the Lemolo watershed, the total acres treated to promote pine health on Bunker Hill and within the Lemolo watershed, probable sale quantity, and the total acres of hazardous fuels treated on Bunker Hill and within the Lemolo watershed.

OTHER ISSUES

Some preliminary issues and concerns raised during scoping were determined not to be significant issues by the line officer, as described in the National Environmental Policy Act (Committee on Environmental Quality Regulations), and were not used to generate alternatives to the proposed action. These issues were not determined to be significant, due to mitigation measures included in the alternatives and compliance with direction and Standards and Guidelines outlined in the 1990 Umpqua National Forest Land and Resource Management Plan (LRMP), as amended.

CHAPTER 2 – ALTERNATIVES INCLUDING THE PROPOSED ACTION

The Interdisciplinary Team (IDT) used the Purpose and Need along with the significant issues as the basis for alternative development. This resulted in a range of alternatives that meets the Purpose and Need and responds to significant issues. A no action alternative was developed as a baseline for estimating environmental effects. It was also developed to address members of the public who feel that any timber harvest on Federal land is still an unresolved conflict concerning alternative uses of the available resources.

ALTERNATIVE 1 (NO ACTION)

This alternative serves as a benchmark, enabling the responsible official and IDT to compare the magnitude of effects of the action alternatives. It also addresses members of the public who feel that no timber harvest should take place on Federal land, no old growth should be harvested, and the recreational value around the Lemolo Lake Recreation Area should be preserved. No action will occur within the Lemolo Watershed Projects Analysis area. This alternative will not meet the need for action described in Chapter One. Although no actions would be implemented with this alternative, it is important to note that other activities will still take place. These activities would include recreation management, routine road maintenance, and project activities covered under other decision documents.

ACTIVITIES UNDER ALTERNATIVE 1 (NO ACTION)

TIMBER HARVEST AND ROAD WORK

No timber harvest, reforestation, slash treatment, or road construction, reconstruction, and decommissioning will occur under this alternative. There will be no probable sale quantity (PSQ) of timber for local and regional economies. There will be no early successional habitat created within the Lemolo watershed. There will be no improvement to hydrologic function related to the Forest Service road system.

FUEL TREATMENT/FIRE HAZARD REDUCTION

No fire hazard reduction will occur through harvest activities and natural fuel treatments. The Lemolo watershed will not begin to move from a high severity fire regime towards the historical moderate severity fire regime.

PINE HEALTH AND STAND DENSITY MANAGEMENT

Pine health will continue to decline within the Lemolo watershed. These declines would lead to increased mortality in mature and old growth pine, increasing the likely hood of a mountain pine beetle outbreak within mature Lodge pole pine stands, and increasing susceptibility of trees to insects and disease within stands not undergoing silvicultural treatment. Overstocked stands targeted for density management would continue to decline in vigor.

SITE PRODUCTIVITY

Site productivity will not be improved on 264 acres of plantations within the Lemolo watershed through sub-soiling of old compacted temporary roads, landings, and skid trails. Losses to surface organic matter and poor water infiltration rates will continue on these sites.

RECREATIONAL VALUE AND OLD GROWTH

Recreational value will not be reduced for some concerned publics, because there will be no timber harvest around the Lemolo Lake Recreation Area. Old growth habitat will not be harvested and converted to early successional habitat. Thirty one percent of the Lemolo watershed will remain as old growth habitat.

ALTERNATIVE 2

The IDT used the Purpose and Need solely as the basis for development of this alternative. The Proposed Action meets the direction found in the 1990 Umpqua National Forest Land and Resource Management Plan (LRMP) as amended, and follows the recommendations in the Diamond Lake and Lemolo Lake Watershed Analysis. The interdisciplinary team worked together in the field for one year to develop the Proposed Action. It must be noted, most of the members of the IDT were participants in the Diamond Lake / Lemolo Lake Watershed Analysis for this area. In doing so, the IDT had a clear idea of the recommendations that were made and how best to incorporate them into development of the proposed action. This alternative best meets the Purpose and Need because it:

- Provides the most probable sale quantity to local economies.
- Provides for the most early successional habitat within matrix lands within the Lemolo watershed.
- Reduces fuel levels over the most acres within the Lemolo watershed.
- Promotes pine health over the most acres within the Lemolo watershed.

- Improves stand health and vigor through density management over the most acres within the Lemolo watershed.
- Provides the most Knutson-Vandenberg (KV) funds for restoration activities, including site productivity improvement and road decommissioning.

ACTIVITIES UNDER ALTERNATIVE 2

TIMBER HARVEST AND ROAD WORK

Timber sales will harvest 448 acres using shelterwood and seed tree silvicultural prescriptions (**Error! Reference source not found. & Error! Reference source not found.**), commercially thin 892 acres (**Error! Reference source not found., Error! Reference source not found.**), partial harvest 39 acres through individual tree selection, harvest 146 acres through small group selection (**Error! Reference source not found.**), selectively harvest 42 acres for posts and poles, and harvest 10 acres for house logs using seed tree silvicultural prescriptions. Timber harvest would produce approximately 27.7 million board feet. All timber harvest activities would meet current standards and guidelines for matrix lands. Artificial reforestation and/or natural regeneration will be used to establish new stands. More detail on silvicultural prescriptions can be found in the Silvicultural Prescription in Appendix I. Five sales are planned to be sold in 2004 and 2005 and operate for 2-3 years. Logging systems will be a combination of skyline, helicopter, loader, and mechanical. Construction of two permanent helicopter landings will occur. These sales will supply timber to local and regional economies on a cost efficient, sustainable basis and help meet the Probable Sale quantity for the Umpqua National forest in 2004 and 2005. No timber harvest will occur within inventoried road-less areas, riparian reserves, unsuitable soils, the OCRA, cultural sites or owl cores.



Picture 1 – Shelterwood Prescription With Green-tree Retention Leave Group



Picture 2 – Seed tree Prescription with Green-tree Retention Leave group in Background



Picture 3 – Small Group harvest – 1 to 5 Acres in Size

Approximately 3.17 miles of new system road construction, 51.79 miles of road reconstruction/maintenance, 6.19 miles of road decommissioning inside potential sale area boundaries, 4.83 miles of road decommissioning outside potential sale area boundaries, 3.9 miles of temporary road construction and subsequent obliteration, and 2 acres of helicopter landing construction will occur under this alternative.

FUEL TREATMENT/FIRE HAZARD REDUCTION

Natural fuels and harvest activity fuels will be treated on 1,861 acres (282 acres of natural fuels) within the Lemolo watershed through underburning and pile burning. Fuel levels will be reduced to less than 21 tons/acre over the 1,861 acres (**Error! Reference source not found. & Error! Reference source not found.**). This will begin to move the Lemolo watershed from a high severity fire regime towards the historical moderate severity fire regime.



Picture 4 – Stand before a commercial thin from below



Picture 5 – Stand after thinning and controlled underburn

PINE HEALTH AND STAND DENSITY MANAGEMENT

Pine health will be promoted on 1,703 acres within the Lemolo watershed through silvicultural prescriptions that reduce stand densities around individual pine trees; regenerate harvested areas with blister rust resistant white pine and sugar pine, and ponderosa pine; and harvest greater than 80 year old lodge pole pine stands that are highly susceptible to a mountain pine beetle outbreak. Stand health and vigor will be improved on 892 acres of mixed conifer stands within the Lemolo watershed through commercial thinning prescriptions that reduce existing stand densities (**Error! Reference source not found.**).



Picture 6 – Commercial thin leaving old growth remnants

SITE PRODUCTIVITY

Site productivity will be improved on 264 acres of plantations within the Lemolo watershed through subsoiling of old temporary roads, landings, and skid trails. KV funding will finance 192.4 acres of the 264 acres planned.

RECREATIONAL VALUE AND OLD GROWTH

Recreational value will be reduced for some concerned publics, through timber harvest on 941 acres surrounding the Lemolo Lake Recreation Area. Three hundred acres of old growth habitat will be harvested and converted to early successional habitat.

ALTERNATIVE 3

The IDT developed this alternative to address some public's concern about timber harvest near Lemolo Lake and other areas within the project analysis area that have high recreational value to them, while still trying to meet Purpose and Need. Harvest units 1-5, 7, 9, 14-24, 26, 27, 30, 32-41, 53-56, 68 and the east half of unit 25 below the 60 road and associated road construction and helicopter landings were dropped from the Proposed Action to formulate this alternative, in order to address some public's concern over recreational value. This alternative does not promote pine health, reduce fire hazard, or improve stand health and vigor on Bunker Hill, facing Lemolo Lake. It partially meets the Purpose and Need because it does not propose activities on this major part of the Lemolo landscape that has high fuel loadings and high risk of fire, high density stands, and old growth ponderosa pine that are declining in health and vigor due to under story conifer encroachment.

ACTIVITIES UNDER ALTERNATIVE 3

TIMBER HARVEST AND ROAD WORK

Timber sales will harvest 172 acres using shelterwood and seed tree silvicultural prescriptions, commercially thin 374 acres, harvest 38 acres through small group selection, selectively harvest 42 acres for posts and poles, and harvest 10 acres for house logs using seed tree silvicultural prescriptions. These sales will supply timber to local and regional economies on a cost efficient, sustainable basis and help meet the probable sale quantity for the Umpqua National forest in 2004 and 2005. Timber harvest would produce approximately 8.7 million board feet. All timber harvest activities would meet current standards and guidelines for matrix lands. Artificial reforestation and/or natural regeneration will be used to establish new stands. Four sales are planned to be sold in 2004 and 2005 and operate for 2-3 years. Logging systems will be a combination of skyline, helicopter, loader, and mechanical. Construction of two permanent helicopter landings will occur. No timber harvest will occur within inventoried road less areas, riparian reserves, unsuitable soils, the OCRA, cultural sites, or owl cores.

Approximately 2.46 miles of new system road construction, 19.18 miles of road reconstruction / maintenance, 0.29 miles of road decommissioning inside potential sale area boundaries, 10.73 miles of road decommissioning outside potential sale area boundaries, and 1.9 miles of temporary road construction and subsequent obliteration will occur under this alternative.

FUEL TREATMENT/FIRE HAZARD REDUCTION

Natural fuels and harvest activity fuels will be treated on 939 acres (303 acres of natural fuels) within the Lemolo watershed through underburning and pile burning. Fuel levels will be reduced to less than 21 tons/acre over the 939 acres. This will begin to move the Lemolo watershed from a high severity fire regime towards the historical moderate severity fire regime.

PINE HEALTH AND STAND DENSITY MANAGEMENT

Pine health will be promoted on 763 acres within the Lemolo watershed through silvicultural prescriptions that reduce stand densities around individual pine; regenerate harvested areas with blister rust resistant white pine and sugar pine, and ponderosa pine; and harvest greater than 80 year old lodge pole pine stands that are highly susceptible to a mountain pine beetle outbreak. Stand health and vigor will be improved on 452 acres of mixed conifer stands within the Lemolo watershed through commercial thinning prescriptions that reduce existing stand densities.

SITE PRODUCTIVITY

Site productivity will be improved on 264 acres of plantations within the Lemolo watershed through sub-soiling of old temporary roads, landings, and skid trails. KV funding will finance 21 acres of the 264 acres planned.

RECREATIONAL VALUE AND OLD GROWTH

Recreational value will not be reduced for some concerned publics, through timber harvest on 0- acres surrounding the Lemolo Lake Recreation Area. Two acres of growth habitat will be harvested and converted to permanent openings in the form of roads.

ALTERNATIVE 4

The IDT developed this alternative to address some public's concern about timber harvest of old growth stands within the project analysis area, while still trying to meet Purpose and Need. Harvest units 2, 3, 5, 7, 9, 14-24, 26, 27, 30, 32-34, 36, 37, 40, 41, 68 and associated road construction were dropped from the Proposed Action to formulate this alternative, in order to address some public's concern over old growth values. This alternative does not promote pine health on Bunker Hill, facing Lemolo Lake. It partially meets the Purpose and Need because it does not propose silvicultural activities on this major part of the Lemolo landscape that has old growth ponderosa pine that are declining in health and vigor due to under story conifer encroachment.

ACTIVITIES UNDER ALTERNATIVE 4TIMBER HARVEST AND ROAD WORK

Timber sales will harvest 254 acres using shelterwood and seed tree silvicultural prescriptions, commercially thin 553 acres, harvest 44 acres through small group selection, selectively harvest 42 acres for posts and poles, and harvest 10 acres for house logs using seed tree silvicultural prescriptions. These sales will supply timber to local and regional economies on a cost efficient, sustainable basis and help meet the probable sale quantity for the Umpqua National forest in 2004 and 2005. Timber harvest would produce approximately 12.7 million board feet. All timber harvest activities would meet current standards and guidelines for matrix lands. Artificial reforestation and/or natural regeneration will be used to establish new stands. More detail on silvicultural prescriptions can be found in the Silvicultural Prescription in Appendix I. Four sales are planned to be sold in 2004 and 2005 and operate for 2-3 years. Logging systems will be a combination of skyline, helicopter, loader, and mechanical. Construction of two permanent helicopter landings will occur. No timber harvest will occur within inventoried road less areas, riparian reserves, unsuitable soils, the OCRA, cultural sites, or owl cores.

Approximately 2.97 miles of new system road construction, 23.84 miles of road reconstruction/maintenance, 1.99 miles of road decommissioning inside potential sale area boundaries, 9.43 miles of road decommissioning outside potential sale area boundaries, 2.5 miles of temporary road construction and subsequent obliteration, and 2 acres of helicopter landing construction will occur under this alternative.

FUEL TREATMENT/FIRE HAZARD REDUCTION

Natural fuels and harvest activity fuels will be treated on 1,208 acres (303 acres of natural fuels) within the Lemolo watershed through underburning and pile burning. Fuel levels will be reduced to less than 21 tons/acre over the 1,208 acres. This will begin to move the Lemolo watershed from a high severity fire regime towards the historical moderate severity fire regime.

PINE HEALTH AND STAND DENSITY MANAGEMENT

Pine health will be promoted on 1032 acres within the Lemolo watershed through silvicultural prescriptions that reduce stand densities around individual pine; regenerate harvested areas with blister rust resistant white pine and sugar pine, and ponderosa pine; and harvest greater than 80 year old lodge pole pine stands that are highly susceptible to a mountain pine beetle outbreak. Stand health and vigor will be improved on 553 acres of mixed conifer stands within the Lemolo watershed through commercial thinning prescriptions that reduce existing stand densities.

SITE PRODUCTIVITY

Site productivity will be improved on 264 acres of plantations within the Lemolo watershed through subsoiling of old temporary roads, landings, and skid trails. KV funding will finance 25 acres of the 264 acres planned.

RECREATIONAL VALUE AND OLD GROWTH

Recreational value will be reduced for some concerned publics, through timber harvest on 267 acres surrounding the Lemolo Lake Recreation Area. Three acres of old growth habitat will be harvested and converted to permanent openings in the form of roads and a helicopter landing.

ALTERNATIVE 5

The IDT developed this alternative to address some public's concern about timber harvest of old growth stands and stands with high recreational value within the project analysis area, while still trying to meet Purpose and Need. Compromise on these two public issues was emphasized in the development of this alternative. Compromise of the recreational value issue was met by dropping the most controversial units in this alternative. Compromise of the old growth issue was met by dropping the highest quality old growth stands within this alternative. Harvest units 2, 5, 9, 14, 15, 18-24, 26, 27, 30, 32, 34, 36, 37, 48, 53-56 and associated road construction were dropped from the Proposed Action to formulate this alternative. This alternative fully meets the Purpose and Need because it proposes needed activities across the Lemolo Watershed, including the Bunker Hill area.

ACTIVITIES UNDER ALTERNATIVE 5

TIMBER HARVEST ROAD WORK

Timber sales will harvest 245 acres using shelterwood and seed tree silvicultural prescriptions, commercially thin 835 acres, harvest 99 acres through small group selection, selectively harvest 42 acres for posts and poles, and harvest 10 acres for house logs using seed tree silvicultural prescriptions. These sales will supply timber to local and regional economies on a cost efficient, sustainable basis and help meet the probable sale quantity for the Umpqua National forest in 2004 and 2005. Timber harvest would produce approximately 20.55 million board feet. All timber harvest activities would meet current standards and guidelines for matrix lands. Artificial reforestation and/or natural regeneration will be used to establish new stands. More detail on silvicultural prescriptions can be found in the Silvicultural Prescription in Appendix I. Five sales are planned to be sold in 2004 and 2005 and operate for 2-3 years. Logging systems will be a combination of skyline, helicopter, loader, and mechanical. Construction of two permanent helicopter landings will occur. No timber harvest will occur within inventoried road less areas, riparian reserves, unsuitable soils, the OCRA, cultural sites, or owl cores.

Approximately 2.95 miles of new system road construction, 37.95 miles of road reconstruction/maintenance, 1.59 miles of road decommissioning inside potential sale area boundaries, 9.43 miles of road decommissioning outside potential sale area boundaries, 3.0 miles of temporary road construction and subsequent obliteration, and 2 acres of helicopter landing construction will occur under this alternative.

FUEL TREATMENT/FIRE HAZARD REDUCTION

Natural fuels and harvest activity fuels will be treated on 1,536 acres (303 acres of natural fuels) within the Lemolo watershed through underburning and pile burning. Fuel levels will be reduced to less than 21 tons/acre over the 1,536 acres. This will begin to move the Lemolo watershed from a high severity fire regime towards the historical moderate severity fire regime.

PINE HEALTH AND STAND DENSITY MANAGEMENT

Pine health will be promoted on 1360 acres within the Lemolo watershed through silvicultural prescriptions that reduce stand densities around individual pine; regenerate harvested areas with blister rust resistant white pine and sugar pine, and ponderosa pine; and harvest greater than 80 year old lodge pole pine stands that are highly susceptible to a mountain pine beetle outbreak. Stand health and vigor will be improved on 835 acres of mixed conifer stands within the Lemolo watershed through commercial thinning prescriptions that reduce existing stand densities.

SITE PRODUCTIVITY

Site productivity will be improved on 264 acres of plantations within the Lemolo watershed through subsoiling of old temporary roads, landings, and skid trails. KV funding will finance 21 acres of the 243 acres planned.

RECREATIONAL VALUE AND OLD GROWTH

Recreational value will be reduced for some concerned publics, through timber harvest on 595 acres surrounding the Lemolo Lake Recreation Area. One hundred and thirty one acres of growth habitat will be harvested and converted to early successional habitat and permanent openings in the form of roads and helicopter landings.

CHAPTER 3 – AFFECTED ENVIRONMENT/ENVIRONMENTAL EFFECTS

- INTRODUCTION
- RECREATIONAL VALUE IN THE LEMOLO LAKE AREA
- VEGETATION
- PINE HEALTH AND DENSITY MANAGEMENT
- GEOLOGY / SOILS
- FISHERIES
- WATERSHED – STREAMFLOW REGIME
- WATERSHED – WATER QUALITY
- WATERSHED – STREAM MORPHOLOGY
- WILDLIFE - MANAGEMENT INDICATOR SPECIES
- FEDERALLY LISTED ANIMAL SPECIES
- FOREST SERVICE SENSITIVE WILDLIFE SPECIES
- SURVEY AND MANAGE SPECIES
- THREATENED, ENDANGERED, AND SENSITIVE PLANT SPECIES

- TRANSPORTATION
- HERITAGE RESOURCES
- FUELS AND FIRE MANAGEMENT
- AIR QUALITY
- LOCAL COMMUNITIES AND ECONOMICS

The following table summarizes the effects of the alternatives on the key issues.

ISSUES & CONCERNS	OLD GROWTH	FIRE HAZARD		RECREATIONAL VALUES	PINE HEALTH		STAND DENSITY		KV ACTIVITIES	Total Harvest Volume MBF
		Bunker Hill	Lemolo Watershed		Bunker Hill	Lemolo Watershed	Bunker Hill	Lemolo Watershed		
ALTERNATIVE	1.) Acres Harvested (percent of old growth harvested within watershed)	1.) Acres of FM-8 2.) Rate of spread (feet per minute) 3.) Flame length height (feet)	1.) Acres where MA reduce fuel level to < 21 tons /acres Prescribed natural fuels acres included in total	1.) Acres harvested within areas identified as high recreational value through public comment	1.) Acres treated to promote pine health	1.) Acres treated to promote pine health	1.) Acres of HTH	1.) Acres of HTH	1.) Miles of road decom in analysis area / in KV 2.) Acres of subsoil in KV 2a) Acres of subsoil out KV 3.) Acres of prescribed fire	
1 (No action)	-0-(0%)	1) -0- 2) 8.1 3) 4.9	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-
2 (Proposed Action)	300 (.4%)	1) 488 2) 2.2 3) 1.8	1,861	941	488	1,703	374	892	1) 11.02 / 3.9 2) 192.4 2a) 71.6 3) 282	27.7
3	2 (.008%)	1) -0- 2) 8.1 3) 4.9	939	-0-	-0-	763	-0-	374	1) 11.02 / .29 2) 21 2a) 243 3) 303	8.7
4	3 (.008%)	1) 102 2) 6.7 3) 4.0	1,208	267	102	1,032	102	553	1) 11.02 / 1.99 2) 25 2a) 239 3) 303	12.7
5	131 (.2%)	1) 399 2) 2.1 3) 2.1	1,536	595	399	1,360	384	835	1) 11.02 / 1.59 2) 21 2a) 243 3) 303	20.5

CHAPTER FOUR - LIST OF PREPARERS

The following individuals participated in the formulation and analysis of the alternatives and the subsequent preparation of this Environmental Assessment.

INTERDISCIPLINARY TEAM

Pat Williams - Interdisciplinary Team Leader/Timber Sale Planner
Rick Golden – Past District Fisheries Biologist
Brady Dodd – Past District Hydrologist
Jim Archuleta - District Soil Scientist
Rick Abbott - Certified District Silviculturist/District Research Coordinator
Angie Snyder - District Heritage Program Manager
Jill Napper – District Fuels Specialist
Ralph Kingsbury – Past District Botanist
Clint Emerson-District Botanist
Jeff Bolher - District Wildlife Biologist
Arthur Matthews – Past Assistant District Transportation Manager
Keith Bond – District Transportation Development Engineer
Mike Kinney - District Road Manager
Steve Hofford – Forest Hydrologist

CHAPTER FIVE - AGENCIES, ORGANIZATIONS, AND PERSONS WHO PARTICIPATED DURING THE EIS SCOPING PROCESS

The critical process of issue identification is termed scoping (40 CFR 1501.7). Scoping is done internally among agency staff and externally among interested members of the public. Public involvement in the scoping process is required by NEPA regulations [40 CFR 1501.7 (a)(1) and 1506.6]. The following actions took place to keep the public informed and generate issues during the scoping process:

- Notice of the Lemolo Watershed Projects proposal was initially published in the Forest's April, 1999 quarterly Schedule of Proposed Actions (SOPA). Since that date, notice has been sent out quarterly in the SOPA.
- The Notice of Intent was published in the Federal Register on April 14, 1999.
- A public meeting was held at Douglas County Library on April 21, 1999.
- A field visit to the project area with the public took place on August 21, 1999.
- The proposed action was sent to publics that requested it.
- The first draft EIS was published and went through a 45-day comment period in November of 2001.
- A public meeting was held on April 24th, 2002 to share new alternatives with the public.

A complete list of agencies, organizations, and persons who participated during the scoping process can be found in this chapter.

CHAPTER SIX – REFERENCES

A complete list of references used in this document can be found in this chapter.

CHAPTER SEVEN - ACRONYMS AND ABBREVIATIONS

A complete list explaining acronyms and abbreviations used in this document can be found in this chapter.

CHAPTER EIGHT – GLOSSARY

A glossary of definitions of technical terms can be found in this chapter.

1. CHAPTER ONE - PURPOSE AND NEED FOR ACTION

1.1. INTRODUCTION

This Draft Environmental Impact Statement (DEIS) describes alternatives, including the proposed action, for conducting timber harvest; reforestation; road construction, reconstruction, and decommissioning; soil restoration; and fuels reduction activities within the Lemolo Lake watershed. The DEIS also analyzes and discloses the effects on the human environment that are likely to occur from implementing the proposed action and the alternatives to the proposed action. This analysis is tiered to the Final Environmental Impact Statement for the 1990 Umpqua National Forest Land and Resource Management Plan (LRMP) as amended by the 1994 Record of Decision for Amendments to Forest Service and Bureau of Land Management Planning Documents Within the Range of the Northern Spotted Owl (ROD), Record of Decision for Amendment to the Survey & Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines; and incorporates the recommendations and analysis completed in the Diamond Lake and Lemolo Lake Watershed Analysis.

1.2. AREA DESCRIPTION

The Lemolo Watershed Projects analysis area is located within the Lemolo Lake 5th Level Watershed and is approximately 76,653 acres. The geologic features of the area consist of the High Cascade Geology. The headwaters of the North Umpqua River begin at Maidu Lake and are located within the Lemolo Watershed. There are five smaller sub watersheds that make up the Lemolo watershed. They are as follow: Bradley Creek 11,577 acres, Lemolo Reservoir 11,918 acres, North Umpqua Headwaters 14,322 acres, Thirsty Creek 15,310 acres and Lake Creek 23,526 acres. The Lemolo Watershed Projects analysis area encompasses several different Management Areas:

- Management Area 1 provides opportunities for unroaded recreation primarily in semi-primitive settings and is approximately 1.2% of the watershed.
- Management Area 2 provides and appropriate environment for concentrated developed recreation activities in areas immediately surrounding Lemolo Lake and is approximately 2.9% of the watershed.
- Management Area 4 preserves the natural character of these lands in a manner consistent with the Wilderness Act of 1984 and is approximately 24.2% of the watershed.
- Management Area 5 provides direction for the Oregon Cascades Recreation Area consistent with the intent of the Oregon Wilderness act and is approximately 42.2% of the watershed.
- Management Area 6 provides for the protection and enjoyment of remarkable designated special interest areas and is .02 % of the watershed.
- Management Area 10 is designed to produce timber on a cost-efficient sustainable basis consistent with other resource objectives for wildlife habitat, riparian habitat and water quality, visual quality, recreation and is approximately 29.1% of the planning area.

Management area direction is found in the Final Environmental Impact Statement for the 1990 Umpqua National Forest Land and Resource Management Plan (LRMP) as amended by the 1994 Record of Decision for Amendments to Forest Service and Bureau of Land Management

Planning Documents within the Range of the Northern Spotted Owl (ROD). The land allocations are listed below in Table 1. The allocations overlap in many areas between the two plans. For example Management area 10 (LRMP) and the matrix (ROD) are basically the same area. Total land allocation acres in the table will exceed the total acres in the Lemolo Watershed Projects Analysis area. This is a result of the over lapping management direction from the two plans.

1.2.1. SITE LOCATIONS

The legal description of the project area includes all or portions of sections 24 through 28 and 33 through 36, T25S, R5 1/2E; sections 30, 31 and 32, T25S, R6E; sections 32 through 36, T25 1/2S, R6E; sections 31, 32 and 33, T25 1/2S, R6 1/2E; sections 10 through 15, 22 through 25 and 36, T26S, R5E; sections 1 through 36, T26S, R6E; sections 4 through 9, 15 through 21 and 27 through 35, T26S, R6 1/2E; sections 1, 12 and 13, T27S, R5E; sections 1 through 28 and 33 10, 11 and 12, T28S, R6E, Willamette Meridian, Douglas County, Oregon.

1.2.2. MANAGEMENT AREA PRESCRIPTIONS

Table 1 (Management Area Prescriptions) identifies the total acres of management prescription and the percentage of the analysis area that it includes.

Table 1 – Management Area Prescriptions

Management Area Prescription	Acres of Application	Percentage of the Analysis Area
NW Forest Plan Riparian Buffers	10,282	13.4
Inventoried Road less Areas	5,069	6.6
Unsuitable Soils	11	0.01
NWFP Matrix	23,146	30.2
Umpqua LRMP Management Area 1	931	1.2
Umpqua LRMP Management Area 2	2,187	2.9
Umpqua LRMP Management Area 4 (MT. Thielsen Wilderness)	18,588	24.2
Umpqua LRMP Management Area 5 (Oregon Cascade Recreation Area)	32,368	42.2
Umpqua LRMP Management Area 6	177	0.02
Umpqua LRMP Management Area 10	22,324	29.1

Figure 1 – Vicinity Map

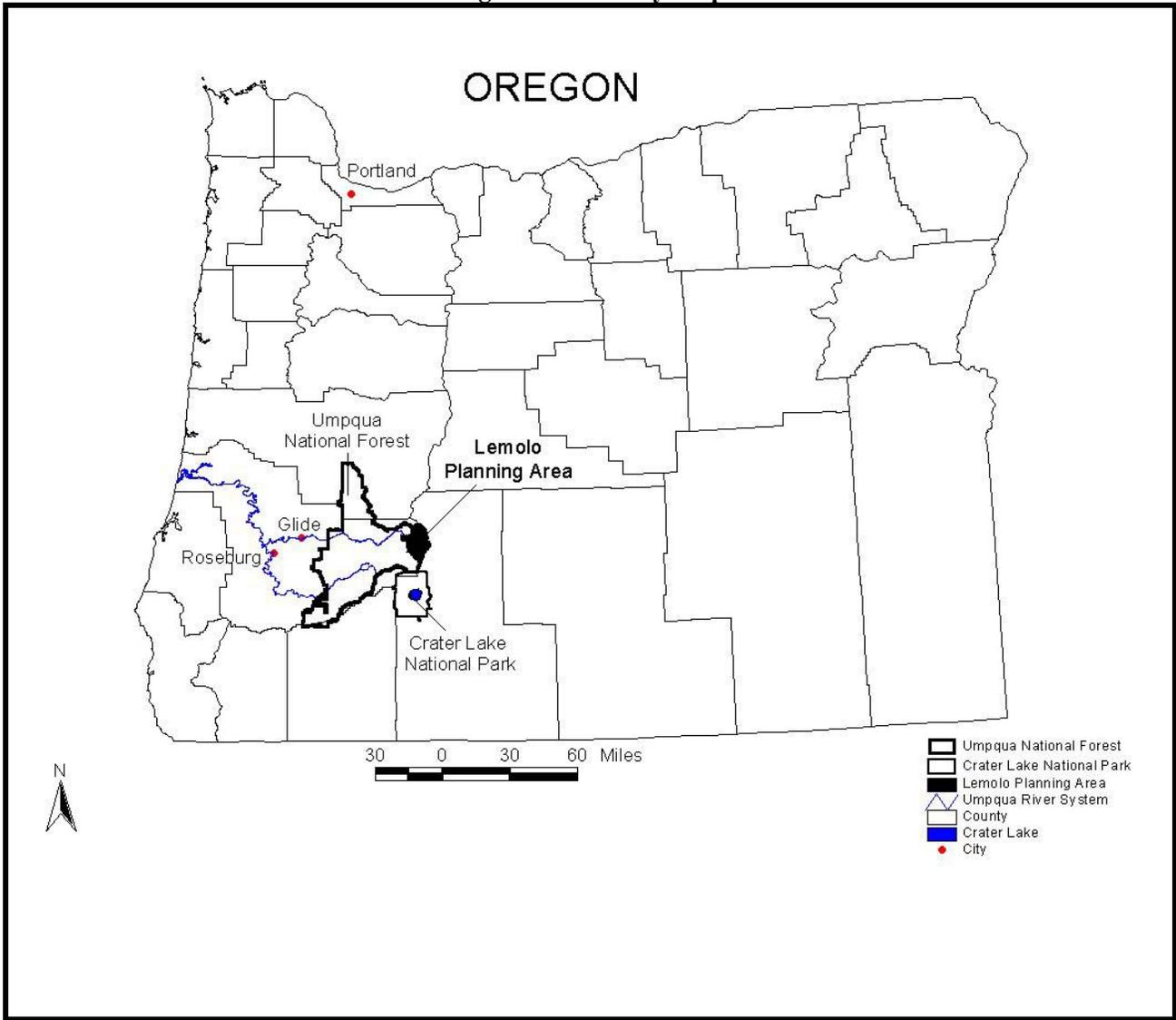


Figure 2- Watershed Boundaries

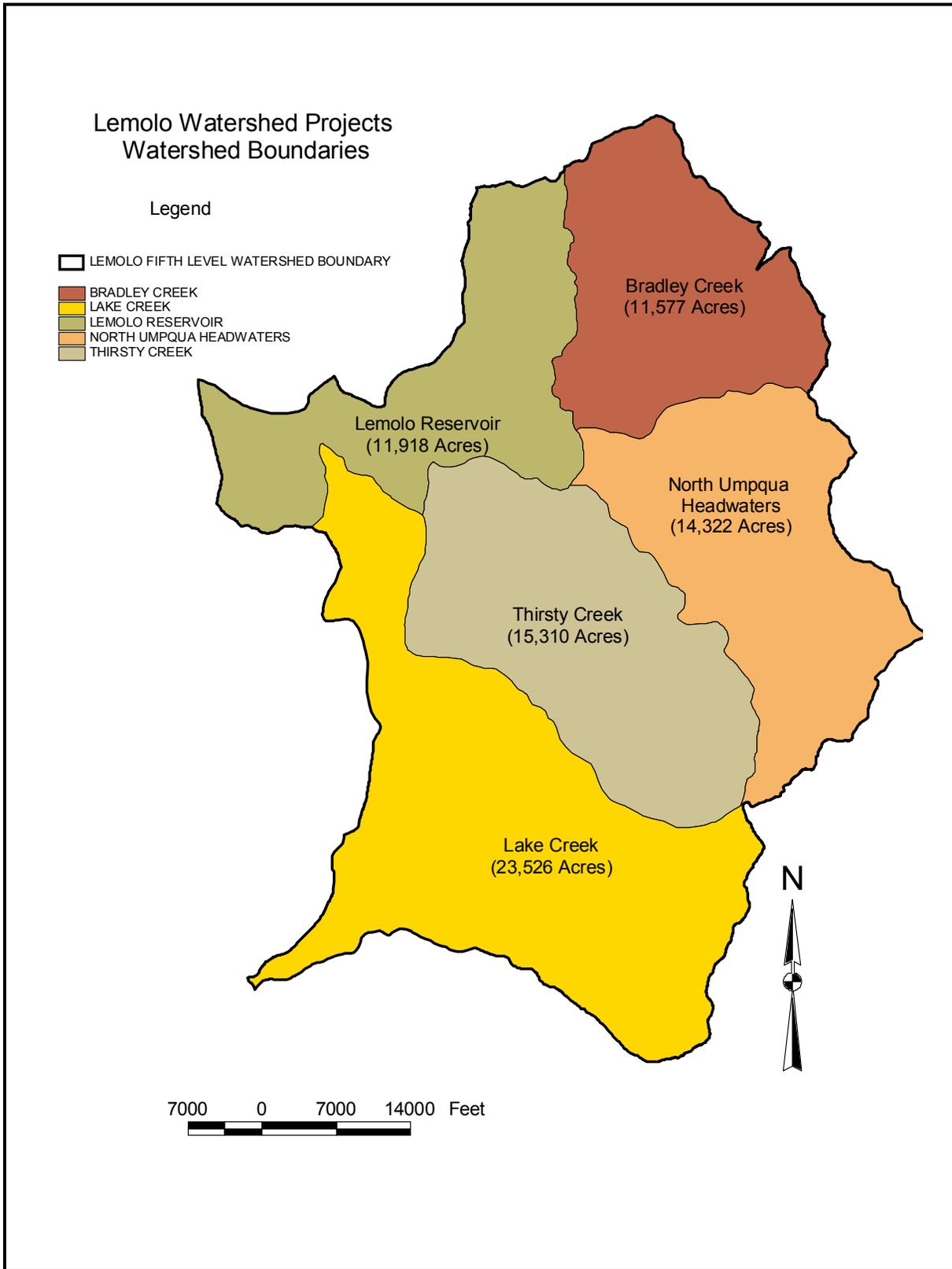
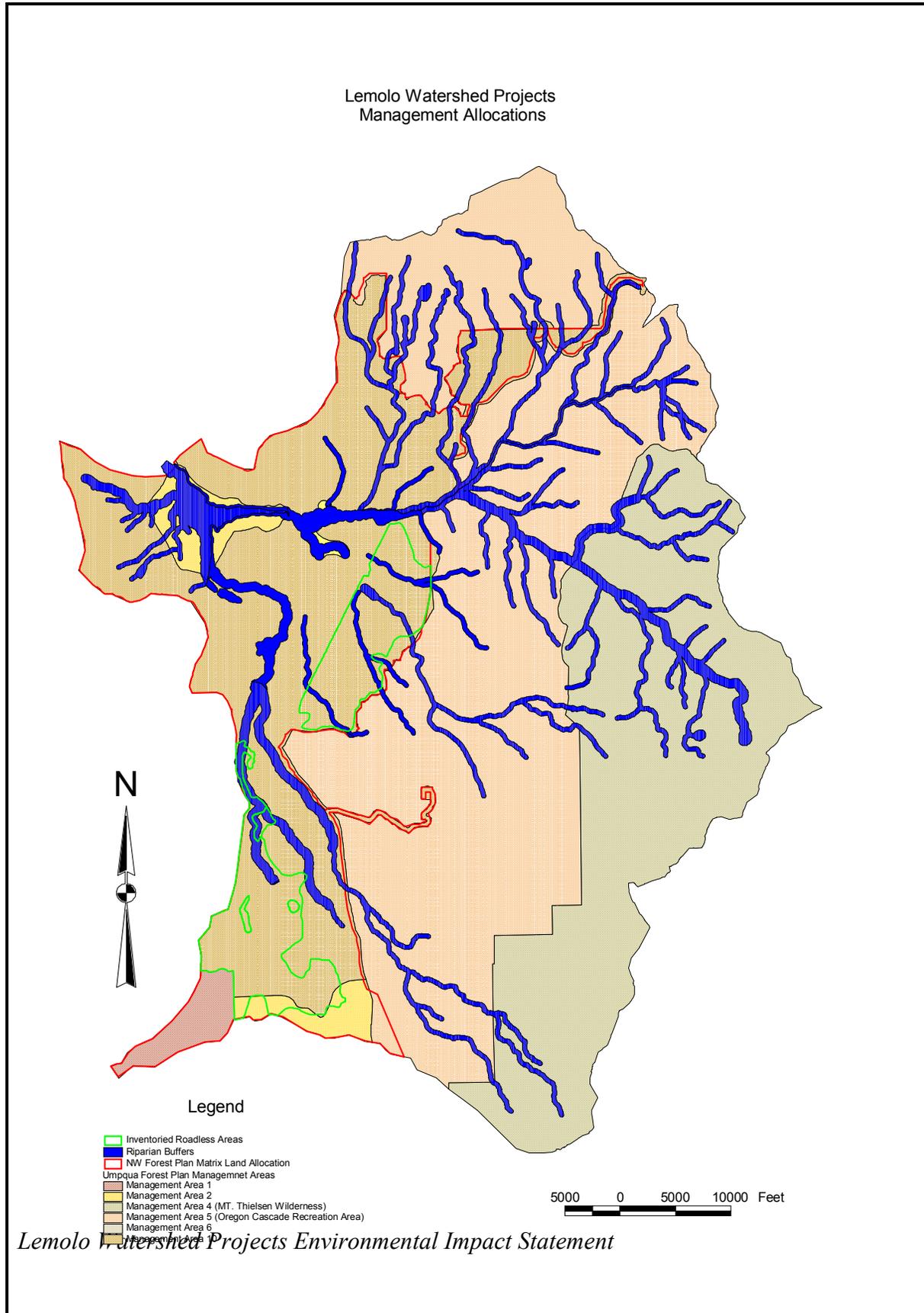


Figure 3 – Land Management Allocations



1.3. PURPOSE AND NEED

The purpose of this project is to implement recommendations that stemmed from the Diamond Lake/Lemolo Lake Watershed Analysis (WA). Goals and objectives of the Umpqua National Forest Land Resource Management Plan (LRMP), as amended by the Northwest Forest Plan ROD are achieved through implementation of WA recommendations. The District Ranger and the Diamond Lake Ranger District staff are responsible for implementing watershed analysis recommendations and achieving Forest Plan goals and objectives.

There is a need to achieve the desired conditions outlined in Chapter Five of the Diamond Lake/Lemolo Lake Watershed Analysis by implementing the WA recommendations within the Lemolo Analysis Area, including the Bunker Hill area. In order to achieve desired conditions the project needs to:

- Maintain the high level of vegetative diversity in both structure and pattern, promote pine health, and improve stand health and vigor by approximating natural disturbance processes and patterns through silvicultural harvest prescriptions that are varied over the Lemolo Lake Watershed landscape. At landscape levels, a mix of treatment intensities makes sense; no treatment on some areas, less intensive treatment on other areas, and more intensive treatment involving reduction of canopy density in still other areas (Agee 2002). To meet this desired condition, there is a site specific need to harvest areas adjacent to or within close proximity to managed stands (plantations) using shelterwood (8-12 live leave trees per acre) and seed tree (4-6 live leave trees per acre) prescriptions, under the 15% green-tree retention Forest Plan Standard and Guideline. This will approximate larger scale disturbance processes such as stand replacement fire. There is a site specific need to commercially thin areas in order to approximate disturbances such as light ground fire and occasional insect attacks, non-stand replacing events. There is also a site specific need to approximate disturbances such as light ground fire and small, localized disturbance such as root disease and concentrated insect attack. This can be achieved through partial harvest and small group harvest of less than 5 acres.
- Move the Lemolo Lake Watershed from a high severity fire regime towards the historical moderate severity fire regime. The WA states, “ Design timber sales to approximate fires natural disturbance at the stand and landscape scale, and help return the watershed to a moderate fire regime”. It also states that “ Once harvest is complete prescribed fire will be used to treat activity created fuel as well as being reintroduced to areas which were not harvested within the sale area.¹ In order to meet this general desired condition, there is a site specific need to do silvicultural treatments that approximate natural disturbance processes, treat slash from proposed harvest activity, and underburn and hand pile slash within natural stands which have been classified as fuel model 8 through fuel model 10.

Historically low and moderate fire regimes are much better candidates for some type of fire safe treatment (Agee 2002). Treatment should focus on surface fuel, ladder fuel, and then crown fuel. (Agee 2002). Reducing these fuels will limit the potential intensity

¹Diamond Lake / Lemolo lake Watershed Analysis, Chapter five recommendations, Page 223, paragraph four.

of fires, and provide a higher chance of controlling wildfires, and allow more of the forest to survive when it does burn (Agee 2002).

The best general approach for managing wildfire damage seems to be by managing tree density and species composition with well-designed silvicultural systems at a landscape scale that includes a mix of thinning, surface fuel treatments, and prescribed fire with proactive treatment in areas with high risk to wildfire.²

- Bring existing road systems up to current standards and reduce the risk to the aquatic resource from road related erosional processes within the Lemolo Lake Watershed. Reconstruct / maintain the road system and decommission system roads through Knutson-Vandenburg funding opportunities on a site-specific basis.
- Provide miscellaneous forest products (post & poles and house logs) by following the harvest priority recommendations.
- Improve the long-term site productivity of managed stands that have been adversely affected by past management practices. In order to meet this general desired condition, there is a site-specific need to subsoil main skid roads and temporary haul roads in managed stands within the Lemolo analysis area through Knutson-Vandenburg or other funding opportunities.

Achieving the desired conditions outlined in the WA leads to meeting the main objective for Management Area 10/matrix lands: to supply a probable sale quantity (PSQ) of timber to local and regional economies on a cost efficient, sustainable basis. Objectives for matrix lands are described on page B-1 of the ROD. The ROD states “Production of timber and other commodities is an important objective for the matrix.” The ROD also states on page B-2 and B-6 that one of the objectives of matrix lands is to provide ecological diversity at the landscape scale in the form of early-successional habitat through commercial timber harvest. There is a need to conduct timber harvest inside Management Area 10/matrix lands within the Lemolo Analysis Area to meet the PSQ and provide for early successional habitat.

1.4. PLANNING PROCESS

The environmental policies and procedures specified in Forest Service Handbook (FSH) 1909.15 were used in developing this Environmental Impact Statement. Following these policies and procedures insures compliance with the National Environmental Policy Act (NEPA) and the Council on Environmental Quality (CEQ) regulations (40 CFR, Chapter V).

In November of 2001 a DEIS for this project was sent out for public comment. Several members of the public commented during the 45-day comment period. Upon completion of the ID team review of the comments, it was agreed there were additional issues that needed to be considered. The Diamond Lake District Ranger directed the ID team to develop additional

² The Effects of Thinning and Similar Stand Treatments on Fire Behavior in Western Forests. Graham, Russel T.; Harvey, Alan E.; Jain, Theresa B.; Tonn, Jonalea R. 1999 US Forest Service, Pacific Northwest Research Station 27p

alternatives to the Proposed Action and initiate a new 45-day comment period with a revised DEIS. This document is the product of that decision.

The Lemolo Lake 5th Level Watershed boundary encompasses the Lemolo Analysis Area and was used as the scope of analysis in order to evaluate many of the effects of the proposed activities. The same Interdisciplinary Team members that worked on this project were members of the Diamond Lake/Lemolo Lake Watershed team. The Diamond Lake/Lemolo Lake Watershed Analysis was used throughout the process to:

- Give insight into the possible direct, indirect, and cumulative effects of the alternatives.
- Help understand ecosystem processes and incorporate that understanding into the analysis.
- Develop the purpose and need and the proposed action.

1.5. SCOPING - ISSUES IDENTIFICATION

The critical process of issue identification is termed scoping (40 CFR 1501.7). Scoping is done internally among agency staff and externally among interested members of the public. Public involvement in the scoping process is required by NEPA regulations [40 CFR 1501.7 (a)(1) and 1506.6]. The following actions took place to keep the public informed and generate issues during the scoping process:

- Notice of the Lemolo Watershed Projects proposal was initially published in the Forest's April, 1999 quarterly Schedule of Proposed Actions (SOPA). Since that date, notice has been sent out quarterly in the SOPA.
- The Notice of Intent was published in the Federal Register on April 14, 1999.
- A public meeting was held at Douglas County Library on April 21, 1999.
- A field visit to the project area with the public took place on August 21, 1999.
- The proposed action was sent to publics that requested it.
- The first draft EIS was published and went through a 45-day comment period in November of 2001.
- A public meeting was held on April 24th, 2002 to share new alternatives with the public.

1.5.1. SIGNIFICANT ISSUES

The original scoping period identified one significant issue and concern from members of the public that recreate in the Lemolo Lake area. This issue was labeled "Recreational value in the Lemolo Lake area", and is discussed in detail below. After the first draft EIS was sent out for a

45-day comment period an additional issue and concern from members of the public was raised relating to the proposed action. This issue revolved around the proposed harvest of old growth habitat within the Lemolo Analysis Area and is also discussed in detail below under the heading “Old Growth Habitat.” These significant issues were based on unresolved conflicts concerning alternative uses of available resources.

John Ouimet District Ranger reviewed all of the issues and determined the significant issues. This approval is documented in a letter signed on March 5th, 2002 and filed in Appendix F of this document.

1.5.2. RECREATIONAL VALUE

The 1990 Umpqua National Forest LRMP, as amended, established Forest-wide multiple use goals, objectives and management area requirements as well as management area prescriptions. The immediate area around Lemolo Lake is in Management Area 2 (Concentrated Developed Recreation). The focus is to provide an appropriate environment for concentrated developed recreation activities in areas immediately surrounding Lemolo Lake. All proposed actions fall outside this management area and meet the direction stated in the LRMP, including standards and guidelines for visual quality objectives. Some members of the public expressed concerns of certain actions that were near this area or near other developed recreation sites in the analysis area. Their concern was that timber harvest activities on Bunker Hill and within the vicinity of the Lemolo Lake Recreation Area would adversely affect their recreational experience and personal value for solitude. Specific units at issue within the proposed action include units 1, 2, 3, 4, 5, 7, 9, 14-24, 26, 27, 30, 32-41, 48, 53-56, and 68 and the south portion of unit 25 below the 60 road.

This issue can be framed in the context of “unresolved conflicts concerning alternative uses of available resources.” At issue is whether the timber sale related adverse effects on recreation and solitude outweigh the risk of high intensity fire, the decline of pine health, the reduction of stand health and vigor on Bunker Hill and within the Lemolo watershed, and the need to provide probable sale quantity from matrix lands. Evaluation criteria and environmental effects surrounding the recreational value issue are based on total acres treated to promote pine health on Bunker Hill and within the Lemolo watershed; total acres harvested within areas identified as high recreational value through public comment within the Lemolo watershed, total acres of hazardous fuels treated on Bunker Hill and within the Lemolo watershed, probable sale quantity, and total acres of stand density management (commercial thinning) on Bunker Hill and within the Lemolo watershed.

1.5.3. OLD GROWTH HABITAT

The 1990 Umpqua National Forest LRMP, as amended, established Standards and Guidelines relating to late successional/old growth habitat within Fifth Field Watersheds. Standard and Guideline C-44/45 in the Northwest Forest Plan ROD states; “all remaining late-successional stands should be protected when the amount of late-successional habitat within a Fifth level Watershed falls below 15%.” Late-successional habitat is defined as forest greater than 80 years old. Analysis shows that none of the alternatives within this DEIS drop the level of late-successional habitat below 15% of the total area within the Lemolo Fifth Field Watershed, thus meeting the Standard and Guideline. In fact, none of the alternatives drop the level of late-

successional habitat below 60% and the level of old growth habitat below 30% of the total area within the Lemolo Watershed.³

Even though all alternatives meet the late-successional Standard and Guideline, many members of the public are still concerned about harvesting old growth stands. There are 23,720 acres of old growth stands within the Lemolo Watershed Projects Analysis area, as described in the Northwest Forest Plan (ROD – Glossary F-4). Old growth forest stands are usually at least 180-220 years old with moderate to high canopy closure; a multi-layered, multi-species canopy dominated by large over story trees; high incidence of large trees, some with broken tops and other indications of old and decaying wood (decadence); numerous large snags; and heavy accumulations of wood, including large logs on the ground. Old growth stands have been delineated using the vegetative age class information from the “ump_femat_age” coverage located in the Umpqua GIS reference library. Specific units at issue within the proposed action include; 2, 3, 5, 7, 9, 14-24, 26, 27, 30, 32-34, 36, 37, 40, 41, 68 and associated road construction. At issue is whether to maintain these existing old growth stands at this time or harvest them within matrix lands inside the Lemolo Watershed Projects analysis area under the Northwest Forest Plan. If no harvest of old growth occurs there are tradeoffs related to pine health, probable sale quantity, and fire hazard within the analysis area. The evaluation criteria and environmental effects surrounding the old growth issue are based on the total acres of old growth harvested within the Lemolo watershed, the total acres treated to promote pine health on Bunker Hill and within the Lemolo watershed, probable sale quantity, and the total acres of hazardous fuels treated on Bunker Hill and within the Lemolo watershed.

1.5.4. OTHER ISSUES

Some preliminary issues and concerns raised during scoping were determined not to be significant issues by the line officer, as described in the National Environmental Policy Act (Committee on Environmental Quality Regulations), and were not used to generate alternatives to the proposed action. These issues were not determined to be significant, due to mitigation measures included in the alternatives and compliance with direction and Standards and Guidelines outlined in the 1990 Umpqua National Forest Land and Resource Management Plan (LRMP), as amended.

1.6. MANAGEMENT DIRECTION

The Umpqua NF LRMP as amended by the Northwest Forest Plan, specifies overall direction to manage the forest, including management goals and objectives, activity Standards and Guidelines, and management prescriptions for each land allocation. This analysis is based on site-specific direction for implementing the proposed action or its alternatives and the application of the goals of land allocation activities with these land management plans.

³ Please refer to Appendix I – Silviculture; “Analysis of Late Successional Forest within the Lemolo Lake Fifth Field Watershed.”

1.6.1. UMPQUA NATIONAL FOREST LAND AND RESOURCE MANAGEMENT PLAN

Pursuant to CEQ 1502.20, this Draft EIS is tiered to the Umpqua National Forest Land and Resource Management Plan (USDA Forest Service 1990) as amended by the Northwest Forest Plan (USDA Forest Service and USDI Bureau of Land Management, 1994).

1.6.2. NORTHWEST FOREST PLAN

In June 1990, the northern spotted owl, (*Strix occidentalis caurina*), which lives primarily in late-successional forest in the Pacific Northwest and northern California, was listed as a threatened species under the Endangered Species Act (ESA). Reasons for listing included past and projected losses of suitable habitat caused primarily by timber harvest.

On April 2, 1993, President Clinton held a Forest Conference in Portland, Oregon, to deal with the controversies over forest management and protection of species associated with old-growth forests in the Pacific Northwest and northern California. Scientists, economists, representatives from the forest products industry, environmental groups, Indian tribes, and others presented concerns, opinions, and proposals to the President about the various issues involved in managing the region's forestlands. Following the conference, President Clinton established a Forest Ecosystem Management Assessment Team (FEMAT) to develop options for the management of Federal forest ecosystems to provide habitat that would support stable populations of species associated with late-successional forests. A Final Supplemental Impact Statement assessing the potential impacts of the options developed by FEMAT was completed in February 1994. A ROD adopted Alternative 9, which is based on a system of Late-Successional Reserves (LSRs), Riparian Reserves, Adaptive Management Areas, and a Matrix of Federal lands interspersed with non-Federal lands. These designations complement existing Forest Plan allocations, which were allocated to administratively withdrawn and Congressionally Reserved lands.

The Record of Decision for the Amendments to the Forest Service and Bureau of Land Management Planning Documents within the Range of the Northern Spotted Owl, is commonly known as the Northwest Forest Plan (NWFP). This ROD, jointly signed by the secretaries of Agriculture and Interior, amended the Umpqua National Forest Land and Resource Management Plan (LRMP or Forest Plan) and other existing plans within the range of the northern spotted owl. This amendment, which became effective on May 20, 1994, provided new goals, objectives, standards, and guidelines for resource management. It added several new land allocations, each with its own set of Standards and Guidelines. These land allocations overlay and merge with the allocations from the 1990 LRMP. The direction in the Northwest Forest Plan supersedes the LRMP allocations where it is more restrictive or provides greater benefits to late-successional ecosystems. Direction from the Forest Plan is retained where it is more restrictive or is unaffected by the Northwest Forest Plan.

1.6.3. AMENDMENTS TO SURVEY AND MANAGE PROVISIONS OF THE NORTHWEST FOREST PLAN

On January 12, 2001, the Forest Service, Bureau of Land Management (BLM), and US Fish and Wildlife Service announced the signing of a Record of Decision by the Secretaries of Interior and Agriculture to amend the "Survey and Manage" provisions in the Northwest Forest Plan.

These amendments were made through supplemental Standards and Guidelines. This decision clarifies Survey and Manage language by eliminating inconsistent or redundant direction; better identifies species needs, based on updated information, and establishes a process for adding or removing species when new information becomes available. The decision incorporates the most up-to-date science, improves projects with information on rare and little known species, and uses the agencies' limited resources more efficiently.

The Northwest Forest Plan required Federal land managers to follow Survey and Manage Standards and Guidelines to provide benefits to some 400 species of amphibians, bryophytes, lichens, mollusks, vascular plants, and fungi. The agency scientists discovered that it was not possible to identify some species in the field or locate some species within one or two years of conducting surveys. In addition, there were no criteria for changing categories, adding, or removing species from the Survey and Manage list. This resulted in both management activities that were more restrictive than necessary to meet species persistence objectives, and some species not receiving adequate protection. In 1998 the agencies began the preparation of a Supplemental EIS to correct the identified problems. Also, in 1998 the agencies were sued over implementation of the Survey and Manage guidelines (ONRC Action v. USFS, Civ. #C98-0359D). The District Court of Washington issued a mixing ruling. A "settlement agreement" was negotiated with the plaintiffs that allowed the agencies to continue their program of work. The settlement agreement was costly to implement and the surveys for some species under this agreement did not provide either credible protection for the species or credible scientific information for species management.

The Record of Decision for Amendments to the Survey and Manage, Protection Buffer, and other Mitigation Measures and Guidelines will:

- Focus agency budget and personnel on those species, habitats, and proposed activities where management is needed most.
- Continue to meet the species management objectives of the Northwest Forest Plan.
- Maintain the balance struck in the Northwest Forest plan between risk to species and commodity production.
- Remove 72 species from Survey and Manage in all (63 species) or part (9 species) of their range. Included are 18 fungi, 35 lichens, 11 bryophytes, 2 mollusks, and 6 vascular plants.
- Under the Record of Decision, 346 species that remain on the Survey and Manage list are placed in one of six categories based on knowledge and concerns about the species, and characteristics affecting the practicality of conducting surveys prior to habit-disturbing activities.
- Known sites will be managed for 327 of the species. Surveys will be done prior to habitat disturbance for 75 species. All 346 species will receive strategic surveys.

The Lemolo Watershed Projects DEIS has incorporated and documented these amendments to Survey and Manage provisions of the Northwest Forest Plan.

1.6.4. OTHER FOREST SERVICE CURRENT AND PROPOSED POLICIES

ROAD-LESS AREA CONSERVATION

In 1972 the Forest Service began identifying road-less areas for wilderness consideration through the Road-less Area Review and Evaluation (RARE I). In 1979, the agency completed RARE II, a more extensive national inventory of road-less areas. Most National Forests and Grasslands employed RARE II data to develop inventories of Road less areas.

On October 13, 1999, President Clinton directed the Forest Service to begin and open and public dialogue about the future of road-less areas throughout the National Forest System. On October 19, 1999, a Federal Register Notice of Intent (NOI) was published that described the intent of the Forest Service to initiate a public rulemaking process that would propose protection of the remaining road-less areas. This proposed rulemaking was designed to respond to strong public sentiment for protecting road-less areas and the clean water, biological diversity, wildlife habitat, forest health, dispersed recreational opportunities, and other benefits they provide. The Road-less Rule is enjoined from implementing at this time. As long as the road-less rule is enjoined, the agency policy for the protection and management of inventoried road-less areas is contained in Interim Direction at FSM 1925.

The Lemolo Watershed Projects DEIS is not proposing any projects within inventoried road-less areas.

FOREST SERVICE ROAD MANAGEMENT POLICY

In January 2001, the Forest Service outlined details of the agency's final Road Management Policy. The policy relies upon scientific analysis and public involvement at the local level. It is designed to help the Forest Service determine how to best manage the more than 380,000 miles of roads in the National Forest roads system. A six-step analysis process was developed and documented in August 1999 (Miscellaneous Report FS-643).

The Forest Service wants to provide a road system that is safe, responsive to the public and agency needs, environmentally sound, affordable, and efficient to manage. The final policy requires the Forest Service to undertake a scientifically based road analysis procedure at appropriate scales and coordinated with other ecosystem analysis in order to make better decisions regarding road management.

The final road management policy emphasizes the need for the Forest Service to:

- Conduct and complete extensive analysis and public involvement at the local level, resulting in a Forest Road System that serves resource objectives and public uses of National Forest lands as identified in Forest Plans.
- More carefully consider and screen proposals to build new roads. Decisions to build new roads will consider available funding for maintenance and operation and the latest scientific information on the effects of roads on ecosystems.

- Maintain or reconstruct needed roads. Give funding and management priority to most heavily-used roads to provide safe travel and reduce adverse environmental impacts.
- After analysis and public involvement at the local level, decommission or convert unneeded roads to other uses.

The new Road Management policy is designed to improve public access to the forests while diminishing the risks of erosion and water quality degradation. It is designed to shift the agency's policy from developing its transportation system to managing its transportation system in an environmentally and financially responsible way. The Forest Service has a mounting \$8.4 billion maintenance and reconstruction backlog and receives only about 20 percent of the annual funding needed to maintain the existing 380,000 plus mile road system to environmental safety standards. The dramatic shift in public use of National Forests over the years led the Forest Service to find a new approach to deciding the appropriate extent, use and standards for the forest road system.

The Road Management policy addresses all roads over which the Forest Service has jurisdiction and sets official definitions for road management terms. In addition, the policy gives interim requirements for inventoried road-less areas and contiguous un-roaded areas. This policy is a result of an extensive public involvement process that began in January 1998 when the Forest Service announced its intention to revise its road policy. At the same time, the agency issued an interim rule that temporarily suspended road construction and reconstruction in certain un-roaded areas on National Forests and Grasslands.

Following comprehensive training on implementation of the new policy and the Road Analysis Process, many concerns were heard about the ability to meet the approaching compliance deadlines in Forest Service Manual Chapter 7710. On May 25, 2001, the Chief of the Forest Service signed an Interim Directive to provide needed management flexibility. Specifically, the Interim Directive provides: a) decisions made after January 12, 2002 must be informed by Roads Analysis, b) extend the requirement to implement roads analysis until January 12, 2003, and c) delegates to Regional Foresters the authority to grant on a case-by-case basis, extensions for completing forest-scale Roads Analysis.

The Lemolo Watershed Projects DEIS has incorporated and documented the six-step Roads Analysis process (located in the Transportation section - Appendix K), to the extent possible at the scale of the analysis area, in conjunction with this NEPA process.

1.6.5. OTHER RELEVANT OR ADJACENT STUDIES

DIAMOND LAKE / LEMOLO LAKE WATERSHED ANALYSIS

As provided under the Northwest Forest Plan, Watershed Analysis is a systematic procedure for characterizing watersheds and is an important tool for implementation of project activities. Watershed analysis is used to guide management prescriptions and monitoring programs, Riparian reserves boundaries, and provides watershed recommendations for restoration.

The "Diamond Lake / Lemolo Lake Watershed Analysis" was completed in June 1998, by the Diamond Lake Ranger District, Umpqua National Forest. The Diamond Lake/Lemolo Lake

watersheds are 5th Level Watersheds located in southwest Oregon, and encompass the eastern portion of the Diamond Lake Ranger District. The analysis area for the Lemolo Watersheds projects includes the Lemolo Lake 5th Level Watershed which is approximately 76,800 acres. There are 5 sub-watersheds within this 5th Level Watershed. The complete text of the Diamond Lake/Lemolo Lake Watershed Analysis document identified and utilized herein is incorporated by reference to this Draft EIS.

None of the sub-watersheds analyzed within the watershed analysis area are Federally designated Key Watersheds in the Northwest Forest Plan.

