Bureau of Land Management
Butte Falls Resource Area
3040 Biddle Road
Medford, OR 97504

Lost Creek Watershed Analysis

March 1998

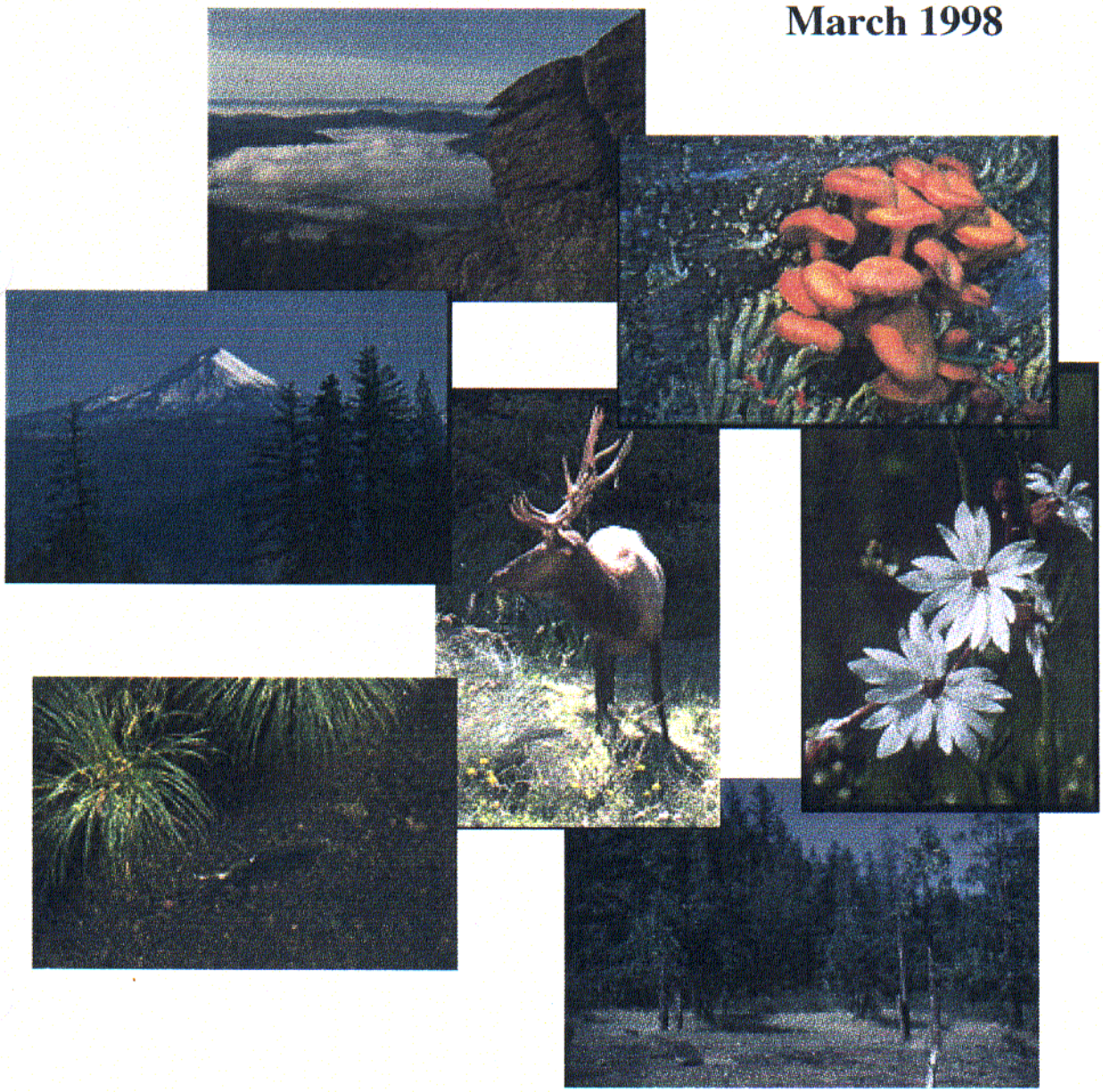

TABLE OF CONTENTS

WATERSHED ANALYSIS ABSTRACT 6

INTRODUCTION 12
WATERSHED ANALYSIS ORGANIZATION 13
CHAPTER FORMAT 14

CHAPTER 1
CHARACTERIZATION OF THE WATERSHED 15
SETTING 15
HUMAN/SOCIAL ASPECT 15
Realty Agreements, Acquisitions and Transactions 16
Archaeology 16
Visual Resource Management (VRM) 17
Transportation System 17
PHYSICAL ASPECT 18
Climate 18
Landform Morphology 18
Geology 19
Minerals 19
Soils 20
Fragile Soils 22
Erosion Processes 22
Water Rights And Water Developments 22
TERRESTRIAL ECOSYSTEM 22
Forest Vegetation 22
15% Retention of Late Successional Stands in the Lost Creek Watershed 23
Special Status Plant Species 24
Terrestrial Wildlife 25
Livestock Grazing 25
Noxious Weeds 25
RIPARIAN ECOSYSTEM 25
AQUATIC ECOSYSTEM 27
General 27
Passage Barriers 27
Fisheries Distribution 27
Hatcheries 28

CHAPTER 2
KEY ISSUES/QUESTIONS 29
CULTURAL SITES 30
LOST CREEK RESERVOIR RECREATION AND VRM II 31
BAKER CYPRESS AREA OF CRITICAL ENVIRONMENTAL CONCERN (ACEC) AND FLOUNCE ROCK ENVIRONMENTAL EDUCATION AREA (EEA) . 34
FOREST HEALTH 34
Current Condition 34
Reference Conditions 38
Forest Health - Interpretation 40
SPOTTED OWL CONNECTIVITY 42
JACKSON TRAVEL MANAGEMENT PLAN 43
FIRE AND FUEL MANAGEMENT 43
CUMULATIVE EFFECTS 44

CHAPTER 3
LANDSCAPE RESOURCE COMPONENTS 46
HUMAN/SOCIAL ASPECT 46
Euro-American Exploration and Early Use 46
Early Settlement of Butte Falls Area 48
TERRESTRIAL ECOLOGY 50
Special Status Plants 50
Terrestrial Wildlife 51
Federally Listed Species 51
Spotted Owl 51
Bald Eagle 53
Peregrine Falcon 53
Other Raptors 54
Golden Eagle 54
Northern Goshawk 54
Great Gray Owl 54
Flammulated Owl 54
Osprey 54
Big Game 55
Game Birds 56
Red Tree Vole 56
Molluscs 56
Special Habitats 56
Wildlife Synthesis & Interpretation 56
Cattle Grazing 57
RIPARIAN ECOSYSTEM 58
Riparian Vegetation 60

Riparian Ecosystem Reference Conditions 60
Current Riparian Condition 60
Suggested Restorations Actions Summary 61
1981 Riparian Survey Results 62
Riparian Reserve Network 63
AQUATIC ECOSYSTEM 64
Water Quality 64
Stream Temperature and Aquatic Resources 65
Non-Point Source Sedimentation 65
Turbidity 66
Stream Sediment Potential from Roads 66
Roads and Stream Channel Morphology 67
Aquatic Mollusks 67
Fisheries Distribution 68
Passage Barriers 68
Hatcheries 69
Population Trends 69
Aquatic Habitat Status 69
Reservoirs and Ponds 72
Aquatic Habitat Reference Conditions 72
Aquatic Habitat Trend 73
Critical Watersheds 73

CHAPTER 4
RECOMMENDATIONS 74
HUMAN/SOCIAL ASPECT 74
Recreation 74
Visual Resource Management (VRM) 74
TERRESTRIAL ECOSYSTEM 75
Forest Stands 75
Spotted Owl Connectivity 77
Jackson Travel Management Plan 78
Special Status Plants: 78
Wildfire and Fuel Mangement 79
Cumulative Effects 80
Transient Snow Zone 80
Slope Stability 81
Soil Compaction 81
RIPARIAN ECOSYSTEM 82
All Riparian Reserves 82
Functioning at Risk Streams 82
Management of Ephemeral Draws 82

AQUATIC ECOSYSTEM 83

MAPS 87

FIGURES 107

ACRONYMS 109

GLOSSARY OF TERMS 111

BIBLIOGRAPHY 124

LIST OF PREPARERS 128

LIST OF MAPS/FIGURE

Map 1. Land Ownership 91
Map 2. Lost Creek W.A.U. and Fifth Field Watersheds 92
Map 3. Lost Creek W.A.U. - Owl Cores/Frost Prone Areas/Fragile Soils/Spotted Owl Connectivity/Special Recreation Management Area (SRMA) 93
Map 4. Visual Resource Management/Area of Critical Environmental Concern (ACEC) 94
Map 5. Intersecting Grazing Allotments 95
Map 6. Lost Creek Watershed Geology 96
Map 7. Transient Snow Zone (TSZ)/Soil Associations 97
Map 8. Transient Snow Zone 98
Map 9. Transient Snow Zone Openings 99
Map 10. Spotted Owl Habitat 100
Map 11. Big Game Management Area / Federal Critical Habitat Unit (FCHU) 101
Map 12. Increased Resource Availability (IRA) 102
Map 13. Fish Distribution and Riparian Reserves 103
Map 14. Fish Distribution 104
Map 15. 80 Year Old and Greater Stands 105
Map 16. Seral Stages 106
Map 17. Matrix Lands Available for Stand Treatment by Aspect and Size Class 107
Map 18. Thinning Opportunities 108
Map 19. Priority Areas for Retaining Large Ponderosa and Sugar Pine 109

FIGURE

Figure 1. 1933 Forest Patterns of Western Oregon 111

WATERSHED ANALYSIS ABSTRACT

KEY ISSUES
The Key Issues/Questions identified below are land designations, human activities, or natural resource values considered significant within the Lost Creek Watershed. These issues were considered the most unique features of the watershed.

Cultural Sites (Existing and Undiscovered Sites)
Lost Creek Lake Recreation and VRM II
Baker Cypress ACEC/Flounce Rock Environmental Educational Area
VRM II
Forest Health
Spotted Owl Connectivity (Elk Creek LSR to Sky Lakes LSR)
Jackson County Travel Management Area
Fire/Fuel Management
Cumulative Effects (Transient Snow Zone, Deferred and High Risk Watersheds)

HUMAN/SOCIAL ASPECT

Ownership
Table 1. Lost Creek WAU Ownership

BLM LANDS	U.S. FOREST SERVICE LANDS	INDUSTRIAL TIMBERLAND	OTHER PRIVATE LANDS
32%	4%	47%	17 %
19,075 ACRES	2,381 ACRES	27,723 ACRES	10,050 ACRES

Communication Site
There are 8 communication sites within the watershed, all situated at Flounce Rock. They include cellular telephone, television translators, commercial and private mobile radio services, and microwave sites.

Archeology
The distribution of known and reported sites suggests that there are numerous, significant, unrecorded sites within the watershed. Every known aboriginal site within the watershed which is not beneath the lake has been heavily and repeatedly vandalized. Vandalism is a recurrent problem at many sites in the area, and is a concern within this watershed. Inventory and monitoring of archaeological sites, together with public outreach and education efforts, may help diminish this persistent problem.

Recreation

Recreation within the watershed is significant. With the completion of Lost Creek Dam (William L. Jess) in 1977, Lost Creek Reservoir became a center for recreation activity within the watershed. The U.S. Army Corps of Engineers manages 10 developed recreation sites associated with the lake. In addition, 30 miles of developed trails exist along and around the lake shore. Most active recreation activities associated with the lake are boating, camping, picnicking, and fishing with hiking and sightseeing being less significant. Also associated with the reservoir are two developed Oregon State Parks, Stewart State Recreation Area and Casey State Park.

BLM has two proposed recreation sites within the watershed (Medford Proposed RMP, 1994, chapter 3-77). Seth Bullis is a 160 acres campsite proposed along Lost Creek Lake and Skookum Creek Wayside along Highway 62. In addition, 9,492 acres including and surrounding Lost Creek Lake has been designated as a potential special recreation management area (SRMA) (Medford Proposed RMP, 1994, chapter 3-83).

Visual Resource Management

According to the Medford District Resource Management Plan, lands within the viewshed of Lost Creek Reservoir are to be classified as VRM class II (Medford Proposed RMP, 1994, chapter 2-41). The remainder of the watershed falls into VRM class III, except for a portion of the watershed that falls within the foreground and middle ground from the county road from Butte Falls to Prospect this is also classified as VRM II.

Baker Cypress Area of Critical Environmental Concern and Flounce Rock Environmental Education Area

The Baker Cypress ACEC was established in 1995 as a 10 acre area in Section 5 of T. 33S, R.2E to include the Baker Cypress Grove and recognized the botanical importance of the grove along with the historic, cultural, scenic, educational, and wildlife values. In addition, an Environmental Education Area of 495 acres was established in Section 5 and Section 8. Currently, no management or monitoring plan exists for the ACEC or the Environmental Education Area.

Transportation System

The road transportation system is highly developed and provides extensive access into this region. There are about 232 miles of system roads within this watershed. This includes 11 miles of state highway, 17 miles of county roads, 98 miles of private timber company roads and 106 miles of BLM roads. There are approximately 35 miles of non-surfaced system roads under BLM control and 29 miles of non-surfaced system roads controlled by the private timber companies. This watershed also contains additional 228 miles of non-attributed or non-system roads, i.e., roads that are recorded in Geographic Information System (GIS), but not identified as to ownership, surface type, control, etc., for a total of 460 miles of constructed roads.

PHYSICAL ASPECT

Soils

Fragile soils have been identified in the watershed which occur mostly north of Lost Creek Lake. These are predominantly Medco soils, or McMullin and McNull soils associated with Medco soils. The potential for slumping and compaction is high in these areas. Landslide and debris flows occur in the northeast portion of the watershed.

TERRESTRIAL ECOSYSTEM

Vegetation

Table 2. Lost Creek Vegetation Distribution- All Ownership

AG LANDS	EARLY SERAL (0-5"dbh)	MID SERAL (5"-11"dbh)	LATE SERAL (12"-21"dbh)	MATURE SERAL (22"+ dbh)	OLD GROWTH (24"+ dbh or> 200 yrs.multi-layer)	NON-COMMODITY TIMBER LANDS
1%	65%	7%	4%	7%	6%	10%
843 ACRES	38,247 ACRES	4,183 ACRES	2,418 ACRES	4,431 ACRES	3,364 ACRES	5,743 ACRES

The trend within this watershed over the past 70 years has been one of structural, habitat, and species simplification. Some of the changes from historic levels include:

1. The current landscape pattern has been shaped predominantly by logging. Historically, the landscape pattern was a result of disturbances, such as fire, wind-throw, insects, disease, that were partially regulated by environmental gradients, such as, climate, soils, and landform.
2. Logging and road construction have created a landscape that is more fragmented and has greater edge and patch densities than historic levels. Large blocks of mature forests are now mosaics of young plantations, mature forests, and stands modified by varying degrees by logging.
3. Reduced interior habitat for species associated with late-successional forests.
4. A shift in abundance and species composition of soil and canopy arthropods towards those most associated with early successional stands.
5. A shift from early seral species, such as ponderosa pine, to mid and late seral species, such as Douglas-fir and white fir due to fire exclusion and the harvest of high value overstory trees.
6. Post harvest treatments have modified the natural process of vegetative succession; the temporal and spatial occurrence of herbaceous, shrub, and hardwood species has been altered by management treatments. The treatments are not always representative of natural processes, and their effects upon long-term ecological health and processes is unclear.
7. Stand densities have increased, thereby increasing soil moisture and nutrient demands resulting in increased tree stress and larger numbers of trees predisposed to insect or disease attack.
8. The understory thinning effect of fire is absent.

9. Vertical canopy structure has increased in existing late-successional stands.

Table 3. Lost Creek Forest Stand Condition - All Ownership

FOREST STAND CONDITION	HISTORIC RANGE	CURRENT MODE
EARLY SUCCESSIONAL/NO SNAGS	< 2%	75%
EARLY SUCCESSIONAL/WITH SNAGS	10-40%	6%
LATE-SUCCESSIONAL/SINGLE LAYER	< 2%	5%
LATE SUCCESSIONAL/MULTI-LAYERED	45-75%	14%

NOTE: Due to data gaps, the percentages shown for current mode are estimates only .

Late-Successional Forest Lands

The Lost Creek watershed is above the 15% threshold that the Standard and Guideline addresses. Federal forest land (19,754 acres) within the watershed contain approximately 58% (11,550 acres) of late-successional stands.

Sensitive Plants

Lost Creek watershed has very few rare plant species. Special Status Plant surveys have been conducted on approximately 2615 acres in the Lost Creek Watershed. Eight (8) special status species were discovered on 10 sites.

The most unusual plant species in the watershed is the Baker Cypress (Cupressus bakerii). This grove, a disjunct from the main population center 90 miles away at the corner of Modoc, Shasta, and Siskiyou counties, California represents the northern most population of the Cupressus genus in the northern hemisphere. There is a noticeable lack of regeneration of Baker cypress. The grove appears to be at significant risk should a catastrophic event occur. No new seedlings have been observed for decades.

Terrestrial Wildlife

A portion of the watershed is USF&WS designated spotted owl Critical Habitat Unit (CHU) that is not within an LSR. The objective within the CHU is to provide additional connectivity habitat between LSR's by maintaining a larger core for 4 of 10 spotted owl nest sites and implement a "light touch" thinning in adjacent stands. There are two bald eagle nest sites, three northern goshawk nest sites, and a great grey owl nest site within the watershed. Continued participation in the JACTMA travel management plan (road use restrictions north of the Lost Creek Lake) will benefit big-game management.

Fire and Fuel Management

Fires in this watershed were often less frequent and more intense than the lower elevation watersheds that we have analyzed in the past. A large portion of the federal lands south of the A road is at relatively low risk from severe, stand replacement type wildfire. Both the south and north shores of Lost Creek Reservoir have a higher potential for catastrophic fires. As development continues to occur along the shores of Lost Creek and recreational activity increases, there will be an increasing probability of human caused fires.

Watershed Cumulative Effects

Transient Snow Zone (TSZ)

The transient snow zone in the watershed occupies 15,617 acres, of which 5177 acres are openings with complete to partial canopy closure. The BLM has 1811 acres of openings in the TSZ, and there are 2817 acres of non-BLM openings. The open areas, due to existing roads, total 549 acres, determined by GIS analysis. The total percent of openings in the TSZ within the Lost Creek WAU is 33%.

High Risk and Deferred Sub-Watersheds

Two areas in the watershed were designated as deferred sub-watersheds by the Medford District RMP and are deferred from timber harvest and other management activities for ten years (Medford RMP, 1995, pages 42-43). Cumulative effects analysis revealed that several other sub-watersheds were at high risk due to the combination of compacted acres, previous logging entries, and the high percent of area in the transient snow zone.

RIPARIAN ECOSYSTEM

Riparian Reserves within the watershed have been heavily impacted by road construction and logging activities. As a result, observations of human impacts include increased sedimentation, reduced shading, and loss of large woody debris are common. Due to these activities, stream systems have been simplified biologically and are more susceptible to degradation during catastrophic events.

There are approximately 2917 acres of Riparian Reserve lands within Lost Creek Watershed. Approximately 687 acres of Riparian Reserves are equal to or less than 20 years old and 1745 acres are 80 years or older according to current GIS data. Currently, no specific Riparian Reserves have been identified for widening or narrowing.

Riparian surveys were completed on 123 miles of perennial, intermittent, ephemeral streams, and dry draws. A total of 75 miles met intermittent or perennial stream criteria and require buffer protection. A total of 14 miles (81 reaches) were classified as properly functioning. By far the largest component of the Riparian Reserves, 55 miles totaling 272 reaches, is classified as functioning at risk. However, 12 reaches were identified with downward trend indicating a deteriorating condition. There are 5 miles (31 reaches) that are non-functioning. Six reaches

were identified with a downward trend.

AQUATIC ECOSYSTEM

Stream Sediment Potential from Roads

Of the 94.9 total miles of roads within close proximity to streams within the WAU, 23.3 miles of road are located within federal Riparian Reserve lands. These would be priority areas of consideration for decommissioning, closure or upgrade, with priority being given to moderate to high sediment potential road segments. In addition, 14.7 miles are located within high erosion potential areas. These would be considered to have a very high potential for delivering sediment to streams and considered highest priority for decommissioning, closure or upgrade.

Roads and Stream Channel Morphology

One measure of the magnitude of channel confinement is the amount of roads which has been constructed within close proximity of streams. Of the approximate 460 total miles of roads constructed within the Lost Creek WAU, 95 miles (21 %) have been constructed within close proximity to streams. Of this total, 23 miles (5 %) are located on BLM land within Riparian Reserves.

Aquatic Habitat Trend

It appears from the available data that aquatic habitat within the WAU has maintained or improved in condition on surveyed reaches over the past fifteen years. Noticeable improvement has occurred on Vine Maple Creek in the categories of pool quality, riparian condition, and large wood abundance. It would be expected that trends on all streams throughout the WAU should improve over the long term, through road decommissioning, greater riparian protection, and maintaining or actively managing to attain late-successional characteristics in riparian areas on federally administered lands. It is uncertain, however, when these benefits will be detectable at the watershed scale though available data suggests a positive overall trend.

Critical Watersheds

All streams within the WAU are not equal with respect to aquatic habitat features. Maintenance or improvement of watersheds which have the best remaining aquatic habitat is one means by which to help assure the long-term stability of fish populations within a larger geographic area. Due to the relatively good quality habitat, high number of beaver ponds, and the relative uniqueness of these features within the WAU, Beaver Dam Creek watershed is considered an important watershed within the Lost Creek WAU. Additionally, Lost Creek (North) is considered a critical watershed based on high quality habitat. General management guidelines would be the same for all watersheds within the WAU, however, restoration measures should be considered a higher priority in the Beaver Dam Creek and Lost Creek (North) watersheds.

LOST CREEK WATERSHED ANALYSIS

INTRODUCTION

Watershed analysis is a collection of natural resource data and analysis of the physical and biological conditions, over time, within a defined area. A comprehensive assessment of the watershed condition, natural processes, and the interactions between the two, is essential in understanding the value of the resources in the watershed and the consequences of management actions. Watershed analysis provides an opportunity to compile data, review the changes that have occurred, and develop a strategy on how to proceed. Much of the watershed information in this document was stored in government office files and computers, or in the minds of senior resource specialists and field technicians. Over the past decades, human activities within the watershed have increased as pressure to utilize timber resources remains strong while concern for protection and management of a broader range of resources has risen. Resource values are changing over time in the view of the public and are reflected in new Resource Management Plans. In addition, management activities and standards differ for private and federal lands. Until now, no cumulative, multi-disciplinary resource assessment has occurred at the watershed scale.

The Lost Creek Watershed Analysis provides a description of the current condition, the historic condition, and management recommendations to achieve a desired future condition. Inter-relationships between physical aspects such as parent material, landform, topographic relief, soil types, hydrology, climate, and fire shape the biological response. Analysis between historic and current resource data provides a basis for interpretation of trends within the watershed.

Disturbances have influenced the landscape. Soil productivity, hydrologic function, vegetative conditions, wildlife habitat, and species viability are a few of the important resource values affected by disturbances. Frequency, duration, and intensity of the disturbance are components which describe the extent and degree of the disturbance. Some of the common disturbances identified in Lost Creek Watershed include: Native Americans and Euro-Americans land practices, wildfire, wind storms and climatic precipitation patterns that produce rain and snow storms, floods, and debris torrents. Each specialist attempts to relate pertinent disturbances from a historical and current condition perspective into the desired future condition.

Although private lands are analyzed in this document, management of private lands is at the discretion of the landowner in conformance with state and federal regulations. This watershed analysis makes broad inferences on a landscape scale, based on previous private land management practices in the watershed to develop general watershed trends. No value judgement is intended to be placed on private land management practices. The location, juxtaposition, current, and historical management of private lands contributes to the resource values and spatial patterns in the watershed as does federal land ownership and management practices. It is important that watershed analysis recognizes and includes all lands, resource values, and management activities within the watershed.

Landscape analysis is based on the methodology outlined in Ecosystem Analysis at the Watershed Scale, Federal Guide for Watershed Analysis, Version 2.2, August 1995.

WATERSHED ANALYSIS ORGANIZATION

The Lost Creek Watershed Analysis is organized into four chapters. They are: Characterization of the Watershed; Key Issues; General Landscape Components; and Recommendations. The chapters are organized with the intention of providing the information pertinent to a single resource in one location so that the reader can quickly find the topic of interest. Generally this format applies, but unfortunately, this is not possible in all cases. In some cases, a brief overview of a resource appears in Chapter 1, Characterization, with the main content occurring in Chapter 2 and 3.

The first chapter is a general characterization of the watershed. This chapter is intended to provide a brief description of the components within the watershed. Some physical aspect landscape components are discussed in their entirety in this chapter. No additional discussion occurs in the document for Landscape Morphology, Geology, Minerals, Soils and Water Rights, and Water Developments. Other components are described in brief with further elaboration in Chapter 3.

The second chapter, Key Issues/Questions, deals with unique or unusual aspects of the watershed in comparison to other watersheds in the area. These are the issues which the team elevated above the other resource values so that additional attention would focus on them. Many of the resource values relate to Lost Creek Reservoir and the high amount of visitors attracted to the area. Other Key issues include the high number of cultural sites in the area. The Baker Cypress Area of Critical Environmental Concern and the Environmental Education Area are located near Flounce Rock and are unique management areas. Forest health was considered an important issue due to the extent and condition of the forest lands. Key wildlife issues in the watershed include additional spotted owl connectivity areas and the Jackson County Travel Management Area for big game. Fire and fuel management are high concerns in the watershed. Finally, cumulative effects issues in the watershed were identified in the Medford RMP and by the watershed analysis team. Discussion of many of the physical processes that relate to Key Questions are included in individual resource components which occur in Chapter 3.

The third chapter, General Landscape Resource Components, includes the bulk of the resource components in the watershed. Within the discussion of each resource element is a description of the current condition, reference condition, and interpretation or trend of the resource.

The fourth chapter, Recommendations, lists all the recommendations by resource for the watershed. The Recommendations Chapter summarizes appropriate management activities to achieve the resource goals. Recommendations are provided as general, as well as specific measures to guide future management and restoration activities on federally administered lands. The format for each resource generally follows as a description of the resource, the management

concern for the resource, assumptions which frame the recommendations, suggested actions which would be effective in managing the issue, a rationale, measurement and monitoring of the actions, and means of determining a level of success.

CHAPTER FORMAT

The organizational format of each chapter is divided into five broad headings which are: Human/ Social Aspect, Physical Aspect, Terrestrial Ecosystem, Riparian Ecosystem, and Aquatic Ecosystem. Only chapter two, Key Issues/Questions, is organized by individual topics as listed at the beginning of the chapter. Within each broad heading are individual resource components which are discussed in detail, including current condition, historical condition and trends.

CHAPTER 1
CHARACTERIZATION OF THE WATERSHED

SETTING

The Lost Creek Watershed Analysis Unit (WAU) is located northeast of Medford and is bisected by Highway 62. The WAU covers approximately 59,229 acres (93 square miles) and is one of many 5th field watershed analysis units which comprise the upper Rogue River drainage. Lost Creek Watershed is bounded by five watersheds. Elk Creek Watershed borders the watershed to the northwest and is located upstream and to the north and northeast. Central Big Butte Watershed is adjacent to the southeast while Lower Big Butte Watershed adjoins to the south, and Indian Creek Watershed is attached at a narrow segment on the downstream side.

The Lost Creek Watershed is located within the Western Cascade Geological Province in Jackson County. It is within the Butte Falls Resource Area (BFRA) of the Medford Bureau of Land Management (BLM) and includes approximately 2,381 acres of U.S. Forest Service Rogue River National Forest (USFS, RRNF) lands administered by the Prospect and Butte Falls Ranger Districts (see Table 1 below). The WAU includes portions of Township 32, 33, and 34 South of Range 1, 2, and 3 East.

HUMAN/SOCIAL ASPECT

The greatest portion of federal lands within the WAU are designated Matrix lands in the Forest Ecosystem Management Assessment Team Report (FEMAT). Matrix lands are those federal lands outside of reserves, withdrawn areas, and Managed Late Successional areas. The other land allocations in the WAU are Riparian Reserve lands, Northern Spotted Owl Activity Centers, and Connectivity Blocks. Most timber harvest and silvicultural activities will be conducted in that portion of the Matrix lands with suitable forests according to the Record of Decision (ROD) for Amendments to Forest Service and Bureau of Land Management Planning Documents Within the Range of the Northern Spotted Owl, April 1994. The Matrix lands are all within the northern General Forest Management Area (GFMA) (Medford RMP, 1995, page 39).

Table 1. Lost Creek WAU Ownership

BLM LANDS	U.S. FOREST SERVICE LANDS	INDUSTRIAL TIMBERLAND	OTHER PRIVATE LANDS
32%	4%	47%	17 %
19,075 ACRES	2,381 ACRES	27,723 ACRES	10,050 ACRES

Residential property and farmlands within the WAU are located along the valley bottom of

Highway 62, west and north of Lost Creek Reservoir.

Realty Agreements, Acquisitions and Transactions

Realty transactions within the Lost Creek Watershed have ranged from rights-of-way to withdrawals, access acquisition, and leases. Over the past 15 to 20 years there have been 43 oil and gas leases covering approximately 37,000 acres authorized within the watershed. Development never went beyond the speculation and exploration stage. All exploration leases have expired and no development occurred.

There are 5 logging road rights-of-way agreement areas covering approximately 4,580 acres of federal land and approximately 5,140 acres of private land holdings within the watershed. Two driveway access rights-of-way and one spring development covering about an acre of land have been granted within the watershed.

There are 4 withdrawals by either the BLM, the Army Corps of Engineers (ACoE) or the Federal Energy Regulatory Commission covering approximately 888 acres within the watershed. Respectively, 560 acres involve the Rogue River Recreation Area, approximately 200 acres involve the Lost Creek Reservoir, and 128 acres involve a power line associated with the Federal Energy Regulatory Commission. Six (6) power lines occupying approximately 250 acres are found within the watershed.

There are 8 communication sites within the watershed, all situated at Flounce Rock. They include cellular telephone, television translators, commercial and private mobile radio services, and microwave sites.

The State of Oregon is in the process of acquiring approximately 325 acres of the watershed in a state selection process whereby the state is given federal acreage as a token of compensation for a reduced tax base due to federal ownership. Parcels under consideration are T. 32S., R. 3E., Sec. 18 and 19, and T. 33S., R. 1E., Sec. 30.

Archaeology

Numerous archaeological sites are recorded within the Lost Creek Watershed boundaries as well as in the immediate vicinity of the watershed. Most of the sites were discovered and studied prior to the construction of Lost Creek Dam, also called William L. Jess Dam. Many of these sites are now inundated. In addition, a number of sites are recorded on the low knolls and ridges above Lost Creek Reservoir in areas associated with meadows and springs, and above the current lake. A few isolated sites have been found on the ridges near Burnt Peak and Olson Mountain.

Recorded sites consist mainly of those associated with Native American habitation of this area. However, there are also a few sites which are derived from the early period of Anglo settlement. There are no recorded traditional cultural sites in the watershed. Although there are no sites formally nominated to the National Register of Historic Places within the watershed, many of the

sites discovered and evaluated within the watershed have been determined to meet the criteria for inclusion in the National Register.

In addition to the sites recorded within the watershed, there are numerous sites known in the vicinity. These sites were discovered along Elk Creek in conjunction with the planned dam, and along the Rogue River in conjunction with road improvement projects. Sites are also reported in the southeast portion of the watershed, along the upper reaches of Beaver Dam Creek and its tributaries. Archaeological research, both within the watershed and in its immediate vicinity, has contributed significantly to our understanding of the ancient past of this region.

The distribution of known and reported sites suggests that there are numerous, significant, unrecorded sites within the watershed. Aboriginal sites are most likely to occur along the Rogue River and its tributaries; on low knolls associated with meadows, springs, and south-facing slopes above the Rogue and its tributaries; along creeks, springs, and meadows in the higher elevations; and along the ridges and peaks within and surrounding the watershed. Historic sites also may be associated with the river and creek valleys and upland meadows, with the railroad line to Medco Pond in the southeast part of the watershed, and with trails which follow the ridge lines in the watershed.

Every known aboriginal site within the watershed which is not beneath the lake has been heavily and repeatedly vandalized. Vandalism is a recurrent problem at many sites in the area, and is a concern within this watershed. Inventory and monitoring of archaeological sites, together with public outreach and education efforts may help diminish this persistent problem.

Visual Resource Management (VRM)

According to the Medford District RMP, lands visible from Lost Creek Reservoir are classified as VRM class II (Medford Proposed RMP, 1994, chapter 2-41). Also, a portion of the watershed along the Scenic Byway (county road 921) from Butte Falls to Prospect that falls within the foreground and middle ground in the southeast corner of the watershed is classified VRM II. The remainder of the watershed falls into VRM class III. VRM classifications are as follows:

VRM I: Preserve the existing character of landscapes
VRM II: Retain the existing character of the landscapes.
VRM III: Partially retain the existing character of landscapes.
VRM IV: Allow major modifications of existing character of landscapes.

A perimeter boundary has been established to delineate the area of the VRM II classification within the watershed (see map 4, VRM, page 91). Due to natural physical barriers such as ridges, draws, and slopes, a significant portion of the delineated VRM II classified area is not visible from Lost Creek Reservoir or the Scenic Byway (county road 921), and VRM III standards apply.

Transportation System

The road transportation system is highly developed and provides extensive access into this region.

There are about 232 miles of system roads within this watershed. This includes 11 miles of state highway, 17 miles of county roads, 98 miles of private timber company roads, and 106 miles of BLM roads. There are approximately 35 miles of non-surfaced system roads under BLM control and 29 miles of non-surfaced system roads controlled by the private timber companies. This watershed also contains an additional 228 miles of non-attributed or non-system roads, i.e., roads that are recorded in Geographic Information System (GIS) but not identified as to ownership, surface type, control, etc., for a total of 460 miles of constructed roads.

Due to BLM's checkerboard land ownership, the BLM has entered into numerous reciprocal Rights-of-Way Agreements and Permits with the adjacent landowners. These agreements do not grant rights for the general public to use roads constructed under these reciprocal rights-of-way. It grants certain rights to the holder of the Permit as to the use, maintenance, and disposition of the road system. These agreements enable the BLM to use private roads to access BLM lands and are an essential part of a complete transportation system. Adjacent landowners rely on a significant portion of the transportation system to cross BLM lands for access to their property.

The Transportation Management Objectives (TMO) for the system roads have been developed and are included in Appendix 6. One of the objectives in this watershed is to use temporary roads or alternative harvest techniques to minimize new road construction. The TMO process has identified about 25 miles of BLM controlled and 2 miles of privately controlled system roads for decommissioning within this watershed.

PHYSICAL ASPECT

Climate

Climate of this area is Mediterranean type with typically cool, wet winters and hot, dry summers. Summer temperatures range from the 80's to the high 90's. Occasional daytime temperatures in the summer may reach 100+ degrees Fahrenheit (F). Winter lows drop regularly to 10 to 20 degrees F. Annual precipitation ranges from 35 to 50 inches. Typically, most precipitation occurs in the late fall, winter, and early spring as rainfall, with the exception of the higher ridges where snow accumulates.

Landform Morphology

The topography within this landscape generally varies from relatively steep (60-80%) north of Lost Creek Reservoir to gently sloping terrain with broad low gradient along the Butte Falls/Prospect Highway southeast of Lost Creek Reservoir. The upper Rogue River is bordered by cliffs and rock outcrops. Gentle terrain (<12%) generally occurs on the south portions of the WAU. The dominant ridges forming this drainage run primarily east and west. Elevation ranges from 1600 feet at Casey State Park to the topographic high of 5056 feet at Olson Mountain.

In general, valley form characteristics range throughout the watersheds from steep-V shaped and moderate-V shaped reaches to broad valley floors. The steep-V reaches have streams which are

generally constrained by either adjacent hill slopes or roads which have been constructed at the base of a hill slope. Examples of this type of land form feature are adjacent to the frontal tributaries of Lost Creek Lake like Lost Creek (South), Red Rock Canyon, the lower reaches of Beaver Dam Creek, and Round Mountain Creek. Moderate-V reaches have streams which are typically constrained by either hill slopes, roads, or alternating hill slopes and terraces. Examples of this type of land form feature are adjacent to the middle reaches of Beaver Dam Creek and the upper and middle reaches of Vine Maple and Parsnip Creeks. Broad valley floor reaches are typically unconstrained or constrained by terraces or roads. Examples of this type of land form feature are found adjacent to the upper reaches of Beaver Dam Creek, and the lower reaches of Vine Maple, Parsnip, and Crane Creeks. Beaver dams are common in these areas. The broad valley floor and moderate-V reaches are generally characterized by a lower stream gradient with relatively wide valley floors and either historically provided or currently provide some of the best available aquatic habitat. These reaches also typically express the effects of cumulative actions within the watershed to a greater degree than steep-V reaches.

Geology

The two geologic provinces in the Lost Creek Watershed are the Western Cascades and the High Cascades. The High Cascades consist of volcanic rocks with compositions of basalt, basaltic andesite, and andesite. The High Cascades were deposited on top of the Western Cascades, and their composition includes andesite, basaltic andesite, basalt, and rhyolite. Within the Western Cascades localized gold and silver deposits occur near areas of low temperature hydrothermal alterations associated with small intrusive bodies. The Western Cascades continue northward throughout the state, and south to the Klamath Mountain Province.

The Trb rock unit (see map 6, Geology, page 93), comprised of basalt and basaltic andesite (Pliocene and upper Miocene) (Smith, 1982), is the dominant rock type in the watershed. Nearly half of the watershed consists of basalt from lava flows of this age and is located south of Lost Creek Reservoir. Other rock types that occur in the southern portion of the watershed are Miocene mafic vent complexes (Tmv), Miocene/Oligocene sedimentary and volcaniclastic rocks (Tus), Miocene/Oligocene basaltic flows (Tub), Pliocene/Miocene/Oligocene basalt and andesite intrusions (Tib). Pleistocene/Pliocene basalt and basaltic andesite (QTba), and Holocene Mazama ash-flow deposits (Qma)occur both north and south of Lost Creek reservoir.

North of Lost Creek reservoir the dominant rock type is Miocene/Oligocene basalt flows (Tub), Miocene/Oligocene undifferentiated tuffaceous sedimentary rocks, tuffs, and basalts (Tu) is the second most prevalent rock type, followed by Miocene hypabyssal intrusive rocks (Thi). Holocene/Pleistocene landslide and debris flows occur in the north east portion of the watershed. Holocene alluvial deposits (Qal) form in flood plains and fill stream channels north east of Lost Creek reservoir.

Minerals

Past Activities

All past geothermal leases have expired. No locatable mineral claims have existed in the recent past (25-50 years). There has never been any substantiated precious metals found in the watershed. No past mining claims appear on BLM microfiche records. An aggregate rock stockpile of several thousand cubic yards of uncrushed material left over from the Elk Creek Dam construction exists in T. 33S., R. 2E., Sec. 19, NW ¼. Also, the main quarry developed during the dam construction is located in T. 33S., R. 1E., Sec. 35, NE ¼.

Present Activities

The BLM regional rock pits currently used include the following: Floras - Located in T. 33S., R. 2E., Sec. 29, NE 1/4; Summit Prairie - Located in T. 33S., R. 2E., Sec 25, SE 1/4; Burnt Peak - Located in T. 32S., R. 1E., Sec 35, NE 1/4; and Ulrich Flounce Rock - Located in T. 33S., R. 2E., Sec. 33, SW 1/4. Aside from the 4 BLM pits, there are numerous cinder pits and private quarries scattered about the watershed (approx. 8-10). Most are inactive or minor in size.

Future Activity

With new advances in geothermal technologies, there may be more leases granted in the watershed in the distant future. Of the four regional quarries listed above, the Burnt Peak Pit is the quarry most likely to play out and be abandoned first (after one or two more entries), followed by the Ulrich Flounce Rock pit. No new quarries are planned at this time.

Soils

The dominant soil type south of Lost Creek Reservoir is the Dumont and Coyata association (USDA, 1993). It is also the dominant soil association within the transient snow zone. The erosion hazard due to water for this soil association is slight at 1-12% slopes, moderate at 12-35% slopes, and high at 35-60 % slopes. The limiting factor of these soils on slopes of 1-12% is compaction due to the high clay content, particularly when the soil is moist. Dumont soils are very deep (up to 60"), well drained, and derived from andesite. The limiting factors for this soil type are erosion and compaction.

Coyata soils are moderately deep, well drained, and are formed from andesite. The limiting factors for the Coyata soil include slope, erosion, compaction, and underlying bedrock. The bedrock restricts root growth, and as a result, windthrow is a hazard.

The other soil type prevalent in the transient snow zone is the Donegan association. These soils are derived from andesite and volcanic ash deposits. They are moderately deep (20"-40") and well drained soils, occurring on slopes of 35-65%. The hazard potential to these soils due to water is high. Road cutbanks in these soils tend to slump when saturated. Bedrock restricts root growth resulting in windthrow hazard. Low water capacity and high rock content in the soil increases seedling mortality. When these soils are located on gentler slopes of 12-35%, the hazard of erosion due to water is slight, and compaction is the limiting factor. At slopes of 12-35%, the risk of erosion due to water increases to moderate. Steep yarding corridors are subject to rilling and gullying.

The second most dominant soil association in the watershed south of Lost Creak Reservoir is Freezener and Geppert. These soils are derived from andesite. This soil association is similar to the Dumont and Coyata association but typically occurs at higher elevations with higher rainfall. It also occurs in the transient snow zone.

Freezener soils are very deep (60"), well drained, and found on hillslopes. The Geppert soils tend to be found on the more sloping areas of the landscape and are similar to Freezener soils but contain more than 35% rock fragments and are moderately deep soils (20"-40"). The hazard for erosion due to water is moderate. Compaction is the other limiting factor for these soils.

To the east of Lost Creek reservoir the Crater Lake-Alcot complex is present. Crater Lake soils are very deep (60") and well drained. The Alcot soils are very deep and somewhat excessively well drained. These soils are derived from volcanic ash and pumice. The erosion potential due to water is slight at slopes of 1-12%, moderate at slopes of 13-35%, and moderate to high on slopes of 35-60%. Low moisture retention and high soil temperatures increase seedling mortality, as does grazing when soils are dry.

McNull soils are the dominant soil association north of Lost Creek Lake. These soils are moderately deep and well drained, occurring on hillslopes. They are derived from andesite, tuff, and breccia. The erosion hazard due to water on slopes 12-35 % is moderate, for slopes 35-60 % the hazard is high. The underlying bedrock restricts root growth, therefore, windthrow is a hazard. Steep yarding paths are subject to rilling and gullying.

Medco soils occur north of the lake. They are moderately deep and moderately well drained soils occurring on hillslopes. They are derived from andesite, tuff, and breccia. Medco soils are subject to severe slumping. They are considered fragile soils. Steep yarding corridors are subject to rilling and gullying. The dense layer of clay in Medco soils restricts root growth and as a result windthrow is a hazard. The presence of a dense clay layer can also result in a perched water table. Seasonal wetness and high summer ground temperature lead to increased seedling mortality. At 0-7% slope the erosion hazard due to water is slight, at 7-12% the hazard increases to moderate, and at 12-50% slopes the hazard is moderate to high. Compaction is also a limiting factor for this soil. Grazing when soils are wet can lead to excessive runoff, therefore, restricting grazing during wet periods is advised. Tractor logging should be avoided on these soils due to its ease of compaction, particularity since it does not respond well to ripping.

McMullin soils also occur north of the lake. They are shallow, well drained soils occurring on hillslopes. They contain 35% rock fragments. They are derived from tuff, andesite, and breccia. On slopes of 3-35% the erosion hazard due to water is slight and for slopes 35-60% the hazard is high. Cutbanks occasionally slump when saturated. Compaction and seedling mortality are the other limiting factors for this soil. High temperatures in the surface layer and insufficient moisture supply increase seedling mortality.

Fragile Soils

Fragile soils have been identified in the watershed (see map 3, Fragile Soils, page 90). These are predominantly Medco soils, or McMullin and McNull soils associated with Medco soils which mostly occur north of Lost Creek Lake. The potential for slumping and compaction is high in these areas. Landslide and debris flows occur in the northeast portion of the watershed. The landslide and debris flow deposits are areas of potential high instability.

Erosion Processes

Sheet, ravel, rill, gully, and mass movement are typical forms of erosion and all these processes occur in the Lost Creek Watershed. Generally, they are related to water as the agent of erosion but wind, gravity, and human activities contribute to erosion processes. The watershed is comprised of volcanic rock types and pyroclastic deposits which weather to soils high in clay content. As these clay rich soils develop and become deep, moisture and gravity may cause them to liquefy and flow. This results in landslides and debris flows. Debris flows and landslides are more prevalent in steeply sloping areas. This erosion process can scour channels to bedrock or cause entire hillslopes to move. Geomorphic features such as landslide scarps and benchy ground indicate mass movement and earthflows are present. Timber harvest and road construction in these areas can trigger reactivation of the landslide. In areas where the duff layer had been disturbed or removed, soil erosion by rill, ravel, sheet, and gullying is of special concern. Fire, logging, or flood events can all result in removal of the duff layer. Removal of the duff layer increases soil erosion, increases the potential of movement of soil particles downslope into streams, lowers the productivity of the site, and lengthens the time needed for establishment of vegetation. Roads and skid trails that intercept water are particularly susceptible to rill and gully erosion. Ravel can be found along most roadbeds at midslope and in patches throughout the watershed.

Water Rights And Water Developments

There are eleven water developments in the Lost Creek Watershed with existing or pending water rights and reservoir permits. The permitted uses for these developments include livestock and wildlife watering, prescribed fire, and road operations (see Appendix 2, Table 1, page 3).

TERRESTRIAL ECOSYSTEM

Forest Vegetation

Based upon the Medford District plant grouping criteria addressed in the Medford District RMP, 1994, two plant groupings are identified within the Lost Creek WAU. Plant groupings are aggregations of plant associations with the same late seral conifer species and the same principal early seral species.

1. The Douglas-fir/ponderosa pine/ceanothus/herbaceous grouping makes up approximately 64 percent of the watershed. In the grouping, grass, forbs, and shrub species such as snowbrush, varnishleaf, deerbrush, manzanita, and vine maple are common early seral species. Meadows or

ponderosa pine stands may occupy flatter slopes due to local frost severity or soil and drainage variations. Inclusions of white oak-ponderosa pine/manzanita/grass communities represent local soil variations. Frost prone areas within this grouping follow a successional pattern in which ponderosa pine provides frost protection for the subsequent development of Douglas-fir or white fir in the late seral stage. Severe grass competition in the early life of the stand may reduce conifer seedling survival, thereby prolonging the early or mid-seral stages (Medford Proposed RMP, 1994, page 3-28). This plant grouping is similar to the white fir series described in the A Field Guide to the Forested Plant Associations of Southwestern Oregon (USDA, Forest Service PNWR, 1996).

2. The Mixed conifer/interior valley/grass grouping makes up approximately 30% of the watershed. In this grouping, "grass, herbaceous vegetation, poison oak and deerbrush provide severe competition for conifers during the early seral stage. Deciduous brush offers growth competition in mid-seral stages and may delay conifer establishment on hot southern aspects. Conifer species of late and mature seral stages are Douglas-fir and ponderosa pine, with Douglas-fir being climax. Tree form hardwoods are present. Manzanita is locally present and may form dense stands. This group has limited areas which can be considered old growth. A high fire return frequency, coupled with the mortality patterns common to low elevation dry sites, acts to keep this plant grouping in younger age classes" (Medford Proposed RMP, 1994, page 3-29).

3. The white oak-ponderosa pine/manzanita-wedgeleaf/grass grouping makes up approximately 6% of the watershed and occurs on the lower slopes on the north side of Lost Creek Reservoir. Inclusions of mixed conifer forests are scattered throughout this grouping. These communities were originally pine-oak savannahs with either manzanita or wedgeleaf brush or perennial grass species dominant, depending on fire frequency. Madrone is locally present (Medford Proposed RMP, 1994, page 3-28).

15% Retention of Late Successional Stands in the Lost Creek Watershed
Standard and Guideline

Landscape areas where little ***late-successional*** forest persists should be managed to retain late-successional patches. This standard and guideline will be applied in fifth field watersheds (20 - 200 square miles) in which federal ***forest lands*** are currently comprised of 15% or less late-successional forest. This assessment should include all allocations in the watershed. Within such an area, all remaining late-successional stands should be protected. Protection of these stands could be modified in the future, when other portions of the watershed have recovered to the point where they could replace the ecological roles of these stands (NWFP ROD, 1994, page C-44).

Definitions

Late-successional - Forest seral stages which include mature and old-growth age classes (Medford RMP, 1995, page 107).

Mature seral stage - This stage exists from the point where stand growth slows to the time when the forest develops structural diversity; approximately age 80-200. Conifer and hardwood growth gradually decline. Developmental change slows. Larger trees increase significantly in size. Stand diversity gradually increase. Big game hiding cover, thermal cover, and some forage are present. With slowing growth, insect damage increases and stand breakup may begin on drier sites. Understory development is significant in response to openings in the canopy created by disease, insects, and windthrow. Vertical diversity increases. Larger snags are formed.

Old Growth - This stage constitutes the potential plant community capable of existing on a site given the frequency of natural disturbance events. For forest communities, this stage exists from approximately age 200 until when stand replacement occurs and secondary succession begins again.

These definitions are used by BLM to separate age classes for analysis of impacts (Medford RMP, 1994, page 113).

Forest lands - land that is now or is capable of becoming, at least 10 percent stocked with forest trees and that has not been developed for non timber use (FEMAT, 1993, page IX-13)

Forest trees are defined as "native woody plants that regularly attain a height of 20 feet or more in a 50 year period" (TPCC, H-5251-1, page 4).

15% Late-Successional Forest Lands

The Lost Creek watershed is above the 15% threshold that the NEFP Standard and Guideline addresses. Federal forest land (19,754 acres) within the watershed contain approximately 58% (11,550 acres) of late-successional stands.

Of the federal forest ownership, 2,963 acres are necessary to meet the 15% threshold. Using the following forest land allocations, ACEC (Areas of Critical Environmental Concern), Riparian Reserve, Late-Successional Reserve, and ACOE (Army Corp of Engineers) approximately 3,426 acres (17%) meet the late-successional criteria. The location and spatial distribution of these late-successional stands are shown on Map 15, 80 Year and Older, page 102. No timber management activities are planned for these areas other than activities which would enhance late successional characteristics.

Special Status Plant Species

Lost Creek watershed has very few rare plant species. Special Status Plant surveys have been conducted on approximately 2,615 acres in the Lost Creek Watershed. Eight (8) special status species were discovered on ten sites. Thirty-three (33) Special Status Plant Species are known in

the Butte Falls Resource Area on 213 sites.

Terrestrial Wildlife

A mosaic of habitat types supports a diverse array of terrestrial wildlife species. Older seral blocks that support spotted owls are becoming fragmented as stands are partial cut to various intensities. Oak woodlands north of Lost Creek are growing denser as conifers encroach. Federal lands that were clear-cut in recent decades are now growing up into plantations of pole-sapling habitat. Repeated entry on private lands has maintained early seral stages that provide forage for big-game.

Livestock Grazing

The Lost Creek Watershed boundary overlaps the boundaries of two livestock allotments administered by BLM. The two allotments are the Summit Prairie and Lost Creek allotments. In the Summit Prairie allotment, two pastures fall almost entirely within the boundaries of the WAU. The Round Mountain pasture is 23,981 acres in size, of which 8,882 acres are either Public Domain (PD) lands or Oregon and California (O&C) lands (39%). The Parsnip Creek pasture is 11,759 acres in size, of which 3,657 acres are federal lands (31%). These two pastures constitute 26% and 12% of the Summit Prairie allotment, respectively. The Lost Creek allotment is 36,090 acres in size, of which 10,535 acres are federal lands (28%). The balance of land within these allotments is owned primarily by private timber companies, who lease their lands to the livestock operators on an annual basis, and solely for the purpose of livestock grazing. There are yet smaller tracts of land, owned by private individuals other than timber companies, scattered throughout this WAU. There are established grazing districts, primarily around towns and communities, where it is against the law for livestock to roam at large. A small portion of the Trail / Reese Creek grazing district lies within this WAU (see map 5, Intersecting Grazing Allotments, page 92). Although grazing occurs throughout the watershed, grazing impacts to other resource values generally appears to be moderate to low.

Noxious Weeds

Very little of the Lost Creek WAU has been inventoried for noxious weeds. Field observations indicate that weeds occurring in the watershed are primarily small patches and located along roads. Highway 62 is the major conduit through the watershed where noxious weeds are likely to be distributed. Other activities such as road construction, logging, recreation, ranching, and farming contribute to noxious weed distribution. Purple loose strife is found above Lost Creek Reservoir along streams and in wetlands.

RIPARIAN ECOSYSTEM

The watershed is divided into six distinct riparian zones which are defined by topography, vegetation, geology, and soils.

Zone 1

Zone 1 is a south to southeast aspect area between 2000 and 3000 feet in elevation. Zone 1 is located north to northwest of Lost Creek Lake. It has mild to moderate slopes and is typified by rocky oak/grassland savannahs intermixed with hardwood/conifer forests. The riparian vegetation zones are generally narrow to nonexistent and are dominated by upland species such as grasses, poison oak, wild strawberry, and yarrow. The overstory is generally California black oak with Douglas-fir and ponderosa pine. Oregon ash dominates many of the intermittent streams, wetter areas, and areas where subsurface water flows are near the surface.

Zone 2
Zone 2 generally has a south to east aspect between 3000 and 4500 feet in elevation. It is located north and northwest of Lost Creek Lake and above Zone 1. Zone 2 has moderate to steep slopes and is typified by Douglas-fir dominated mixed conifer stands. The riparian zone is a blend of upland species and riparian species with poison oak, snowberry, vanilla leaf, and numerous shrubs. Oregon ash acts in a similar way as in Zone 1, but higher moisture content from elevation and overstory tree shade broadens the well defined riparian zones which are still somewhat narrow.

Zone 3
Zone 3 is generally a north aspect area between 2000 and 3000 feet in elevation. It is located south of Lost Creek Reservoir. It has moderate slopes and is typified by Douglas-fir and ponderosa pine. The riparian zone is narrow to moderately wide, fairly well defined, and dominated by upland species.

Zone 4
Zone 4 is between 2000 and 3000 feet in elevation with generally north aspects. It is located south of the Rogue River and is entirely contained within 1 mile of the river gorge. The slopes in many areas are extremely steep. Riparian zones are broad and not obviously delineated. Douglas-fir and western hemlock are the dominant overstory species with mosses, ferns, and other moisture affiliated obligates. Candy stripe (*Allotropa virgata*), a survey and manage species, was found at several locations within this zone.

Zone 5
Zone 5 is a moderate to high elevation (3000 to 4500 feet) zone with moderate to steep slopes. This zone is located south to west of Lost Creek Lake and is the central portion of Lost Creek WAU. The riparian zones are moderately wide to broad and not easily delineated. Western hemlock and Douglas-fir dominate the overstory. Grand fir and incense cedar are also overstory components. Vine maple and other brushy species dominate in areas where the overstory is more open.

Zone 6
Zone 6 is located on the plateau to the east of Lost Creek. It has mild slopes between 3000 and 3500 feet and is dominated by ponderosa pine. The riparian zones are fairly narrow and well

defined with numerous marsh type vegetation areas which at one time had a great deal of beaver activity. Willow and vine maple dominate many of the open canopy riparian zones. Upland species such as Douglas-fir and white fir are also a major component of the riparian zones.

AQUATIC ECOSYSTEM

General

The dominant water body feature in the WAU is Lost Creek Reservoir. Lost Creek Dam (William L. Jess Dam) was built by the Army Corps of Engineers to provide for flood control and other social benefits in the Rogue River basin. The Lost Creek reservoir has a total storage capacity of 465,000 acre-feet, is 10 miles long and covers 3,426 acres at full pool (Oregon Department of Fish and Wildlife, ODFW, 1994). Major streams within the WAU include the Middle Fork of the Rogue River, Beaver Dam Creek, Round Mountain Creek, Vine Maple Creek, Parsnip Creek, and Cur Creek. Other notable streams are Lost Creek (North and South of the reservoir), Red Rock Canyon, and Hole-in-the-Ground Creek.

Passage Barriers

The primary barriers for adult and juvenile fish in the WAU are culverts, Lost Creek Dam and Medco Pond. Neither Lost Creek Dam nor Medco Pond provide for fish passage.

In addition to human created barriers to fish migration, there are also barriers which occur naturally, such as beaver dams and falls. Although beaver dams may present seasonal barriers, they generally do not result in complete obstruction of fish passage throughout the year. Beaver dams also function as important, high quality habitat for rainbow and cutthroat trout during the winter and summer months. Surveys from 1980 (ODFW, 1981), 1981 (BLM unpublished surveys) and 1997 (BLM unpublished surveys) identified high abundance of fish in pools created by beaver dams. In addition to providing high quality habitat, beaver dams also maintain base water flows during the summer months.

Fisheries Distribution

There are a variety of resident fish which occur within the Lost Creek WAU (see appendix 5, Fish Species Occurring within the WAU). Historically, anadromous salmonids utilized areas above Lost Creek Dam. However, upon completion of the dam this historic range was eliminated. Overall, there is limited information about the full distribution of native and introduced resident species which occur within this WAU. Native fish species such as cutthroat trout, rainbow trout, sculpin species and Klamath smallscale suckers are present within the WAU. Rainbow trout have been found in Beaver Dam Creek and Lost Creek (north side of reservoir) and are the dominant salmonid in these reaches. Cutthroat trout are found primarily in small headwater tributaries where they are the dominant fish species. Although there is some overlap in the distribution of rainbow and cutthroat trout, there appears to be a relatively well defined zone where rainbow trout occurrence decreases and cutthroat trout occurrence increases. This represents approximately 36 miles of resident trout habitat, of which about 11.5 miles is on federal lands.

Sculpins appear to have a distribution similar to rainbow trout. Klamath smallscale suckers have been documented only in Lost Creek Lake. (see map 14, Fish Distribution, page 101).

Hatcheries

The Cole Rivers and Butte Falls hatcheries are the primary fish propagation facilities in the Rogue basin. Coles Rivers hatchery began operation in 1975 and was built to mitigate for the loss of anadromous salmonid habitat above Lost Creek Dam. The Oregon Department of Fish and Wildlife has an active fish stocking program in both Lost Creek Reservoir and Medco Pond. Legal sized (>8") and fingerling rainbow trout are stocked during the spring months (April-June) to support and promote recreational angling on Lost Creek Reservoir and Medco Pond.

CHAPTER 2
KEY ISSUES/QUESTIONS

Key Issues/Questions narrow the discussion to those aspects of the watershed which are unique or play a dominant role in defining the nature of the landscape. Lost Creek WAU is similar in many ways to other watersheds located in the foothills of the Cascade Mountains. Forest stands dominate the landscape and timber harvesting prevails as the main human activity. No Late-Successional Reserves, Key Watersheds, Wilderness Areas or other large special land designations occur within the watershed. Biologists on the team, in general, consider wildlife, plant, and fish species in the Lost Creek Watershed to contain no particular uniqueness or habitat requirements compared to the rest of the Cascades Providence.

Key Issues/Questions are the result of analysis of a watershed by the interdisciplinary process. Some Key Issues are difficult to identify before preliminary analysis of available data is collected and interpreted. The outcome of the analysis could be the addition or deletion of a Key Issue. Other issues are obvious from the beginning and the analysis can focus immediately on them. An attempt was made to allow flexibility during the analysis to the identification and inclusion of Key Issues and Key Questions through a dynamic process. This chapter is dedicated to the discussion of Key Issues and Key Questions.

The Key Issues/Questions identified below are land designations, human activities, or natural resource values considered significant within the Lost Creek Watershed that deserve a higher profile for management consideration. These issues were considered the most unique features of the watershed. Although other landscape components or resources within the watershed may play an important role on a landscape basis, they were not considered Key Issues or Key Questions in this chapter. A discussion of other activities and resource values is found in Chapter 3.

KEY ISSUES

Cultural Sites (Existing and Undiscovered Sites)
Lost Creek Lake Recreation and VRM II
Baker Cypress ACEC/Flounce Rock Environmental Educational Area
Forest Health
Spotted Owl Connectivity (Elk Creek LSR to Sky Lakes LSR)
Jackson County Travel Management Area
Fire/Fuel Management
Cumulative Effects (Transient Snow Zone, Compacted Soils, Deferred and High Risk Watersheds)

CULTURAL SITES

Pre-History and Native American Groups

Due to the extensive amount of archaeological work done before the Lost Creek Dam project, a fair amount is known about the early inhabitants of the valley. This combined with surveys and excavations throughout the region have helped paint a better picture of the native people in the area.

Surveys in the Lost Creek area reveal a long history of use. Beginning about 10,000 years ago, people migrated into the Rogue Valley following the Rogue River. People used the Lost Creek and Butte Falls areas sporadically until about 5000 years ago, and such use was probably associated with travel along the Rogue River by people heading either east or west. About 5000 years ago, use of the area increased. By about 1500 to 1000 years ago, small, permanent villages existed in the Lost Creek area. The people living in these villages participated in a flourishing culture along the upper Rogue River. This native way of life, however, came to an end in the 1850's, as local inhabitants were killed or removed to distant reservations by the new immigrants to the region.

Native American groups who lived in the area at the time of contact with Euro-Americans included the Takelma and Southern Molalla. The Takelma were divided into several bands based upon extended family. Their relations with neighboring groups and early explorers were sometimes hostile. The Takelma often raided their neighbors which earned them the name "Walumskni," or enemy, from their neighbors the Klamath, and "Les Coquins," the Rogues, from the French Canadian trappers. Little is known about the Mollala, though they followed a hunting-gathering-fishing way of life similar to the Takelma.

The Takelma inhabited permanent villages during the winter. These villages were located at lower elevations and near waterways. In the upper Rogue River area, villages were small, consisting of perhaps two to three houses. Houses were substantial rectangular affairs, constructed of poles and planks or slabs of bark over an excavated floor. During the spring, summer, and fall village inhabitants dispersed into the countryside to harvest needed resources as they became available. Warm weather camps were less substantial affairs with shelters built of brush or mats.

The Takelma were hunter-gatherer-fishers who used a variety of techniques to enhance the abundance of the resources they needed. Their diet included such animals as elk, black-tailed deer, black bear, marmot, grey squirrel, quail, grouse, trout, salmon, rabbit, weasel, snakes, frogs, and grass hoppers. Plants were also important for medicines and materials as well as for food. Significant plant foods included acorns, camas and other lily bulbs, grass seeds, pine nuts, and huckleberry. The Takelma used fire for a variety of purposes such as promoting forage for deer and promoting crops such as acorns and camas. This habitual use of fire influenced the landscape by maintaining open, park-like settings in the valley and maintaining upland meadows. In the Lost Creek area, archaeological sites located along the terraces above the creek suggest that the aboriginal landscape was fairly open, with meadows or pine/oak savannahs predominating.

LOST CREEK RESERVOIR RECREATION AND VRM II

Recreation within the watershed is significant. With the completion of Lost Creek Dam in 1977, Lost Creek Lake became a center for recreation activity within the watershed. The U.S. Army Corps of Engineers manages ten developed recreation sites associated with the lake. In addition, 30 miles of developed trails exist along and around the lakeshore. Most active recreation activities associated with the reservoir are boating, camping, picnicking, and fishing with hiking and sightseeing being less significant.

Also associated with the reservoir are two developed Oregon State Parks, Stewart State Recreation Area, and Casey State Park. Stewart State Recreation Area's main recreational activities are boating, camping, picnicking, hiking, and biking. Casey State Park activities are centered on the Rogue River and are primarily fishing and boating. Recreational use at Stewart State Park has increased from 296,638 visits in 1989-1990 to 366,164 in 1993-94 (Dean Runyon and Associates, 1995).

Oregon Department of Fish and Wildlife (ODFW) manages a large hatchery at the base of the dam that has an estimated annual visitation of 100,000 visitors. A nature center currently exists below the dam in McGregor Park. A master plan for the center has been developed which envisions new facilities and recreation opportunities on a fee bases. The estimated use for the facility could exceed 144,300 visits per year (Spirit of the Rogue Nature Center Master Plan, SOTRNC, 1997).

BLM has two proposed recreation sites within the watershed (Medford Proposed RMP, 1994, page 3-77). Seth Bullis is a 160 acres campsite proposed along Lost Creek Lake and Skookum Creek Wayside along Highway 62. In addition, 9,492 acres including and surrounding Lost Creek Lake has been designated as a potential Special Recreation Management Area (SRMA) (Medford Proposed RMP, 1994, page 3-83).

Highway 62 is the main transportation route from the Rogue Valley to Crater Lake. Average daily travel along the road reaches a peak of 7,500 in summer to a low of 4,500 in winter. Crater Lake received 542,611 visits in 1995 and more than half of those visitors passed through the watershed on Highway 62 (SOTRNC Master Plan, 1997).

Away from the Lost Creek Lake and Rogue River, recreation activities are more dispersed in the watershed, centering on hunting. Camping occurs in dispersed, undeveloped sites with approximately 80% of the camping associated with hunting. Fishing is a common dispersed recreation activity at MEDCO pond and Middle and South Forks of the Rogue River.

Long term camping (3-14 days) is becoming more common in some of the more desirable undeveloped sites within the watershed. Previously, this was associated with hunting, but long term family outings in dispersed sites are becoming more prevalent.

Sightseeing, environmental education, and recreational driving are common occurrences within the watershed. Flounce Rock is a BLM environmental education area that receives significant visits for its outstanding view of Lost Creek Reservoir and surrounding Cascade Mountains, as well as its educational opportunities for viewing the rare Baker Cypress trees.

Vandalism to recreation sites has been a concern in the watershed. Recreation sites managed by the Corp of Engineers on the north and west side of Lost Creek Reservoir have been closed to vehicle access due to increased vandalism to the sites. (Ron Howard verbal communication) These sites have remained open to hike in and boat in use, indicating that vandalism is occurring from people who drive in to the sites. Less significant vandalism is occurring in undeveloped sites at MEDCO pond, and dispersed sites on BLM land. Most vandalism occurs at dispersed sites in the form of garbage dumping and unauthorized tree cutting.

The Upper Rogue Regional Tourism Alliance (URRTA) supports recreational and tourist opportunities in the watershed. This alliance is made up of public officials, private business owners, land owners, and local residents who would like to see these opportunities increase the economy of the region. The alliance would support any recreational development in the watershed that attracted more tourist income into the local region without affecting the quality of life or environment.

Historical Recreation

The Upper Rogue Region has long been a destination area for recreation. Over 100 years ago people passed through the watershed on their way to visit Crater Lake. Many stopped to picnic or camp along the scenic portion of the Rogue River. The watershed was also a popular hunting and fishing area at the turn of the century because of accessibility due to the early construction of the road to Crater Lake and the older military road to Fort Klamath. Also, around the turn of the century the small community of Laurelhurst was established along the Rogue River where Lost Creek Lake now resides.

By the 1920's, private camps and lodges were established in the watershed to take advantage of the growing tourist demands along the Rogue River. The road to Crater Lake became State Highway 62. Casey's campground was a popular private recreation site from the 1920's to the 1950's, located where Casey State Park now resides. Laurelhurst State Park was established along the Rogue River in 1936 and by 1961 consisted of 317 acres (Laurelhurst, Weiss, 1991). The park consisted of a picnic area and 36 sites for overnight camping. Visitation at the park in 1963 totaled 34,544 visitors with 9,924 campers (Oregon State Park History 1917-1963, Armstrong, 1997). Laurelhurst park was dismantled in the 1970's to make way for Lost Creek Reservoir.

As early as 1956 people along the Upper Rogue and within the watershed saw a need to capitalize on the tourist industry. The Rogue Wonderland Association was organized by residents to find ways and means to promote improvements of businesses and other projects for the betterment of the communities of the Upper Rogue. By the 1960's the Laurelhurst area within the watershed

was a focal point for tourist and fishing. Many people supporting the tourist trade objected to the construction of the dam to create Lost Creek Reservoir, but the tragedies of the 1964 flood seemed to make the need outweigh the objections.

Recreation Interpretation

The historical record and current data show recreation including tourism has been and still is a significant influence in the watershed. Recreational visits have increased over the years, and will probably continue to increase due to population rises in the surrounding areas and to the availability of more leisure time among the participating public. In addition, as more facilities are constructed and more opportunities exist, outdoor recreational pursuits will continue to increase. Organized groups and alliances would give substantial public support and feedback on any recreational development proposed in the watershed.

Increased recreation opportunities and public support for them in the watershed have been recognized by the BLM. A preplan analysis was completed in September 1991 to look at the possibilities of making a BLM campground on the south shore of Lost Creek Reservoir (Arthur, 1991). The analysis concluded that the needs and means were significant, and little environmental impact would occur in the area from the construction. The analysis called for the campground to be a more primitive, less developed campground which was shown to be the most preferred among campers in Oregon. Due to increased vandalism in the area, it is recommended that the campground be developed in which a full time camp host or camp manager be available at most times to defer the occurrence of vandalism.

Visual Resource Management

The current visual conditions within the watershed are views of mixed conifer forest with areas of natural openings primarily on south facing slopes. In addition, there are views of man-made openings from recent timber harvest activities. These man-made openings are most visible on north facing slopes where natural conditions are primarily solid continuous conifer forests. Other visual components within the watershed are the view of surrounding mountains and rock outcroppings and man-made structures. Other views consist of the Lost Creek Reservoir and open shoreline that fluctuates during seasonal changes in reservoir storage requirements.

Because of the reduction of wildfire within the watershed, natural openings are less common. Some timber harvest activities have created more opening but are somewhat unnatural because many have straight sides or have abrupt edges which are not typical of natural opening created by fire, climatic, or geologic conditions. Man-made structures such as Lost Creek Dam and various transmitter towers primarily on Flounce Rock have also changed the viewshed. The primary objective of the viewshed within the watershed is to maintain the predominance of a solid block conifer forest with mixed natural openings, keeping management activities subordinate to these conditions, primarily in those areas that are most visible by the public.

BAKER CYPRESS AREA OF CRITICAL ENVIRONMENTAL CONCERN (ACEC)

AND FLOUNCE ROCK ENVIRONMENTAL EDUCATION AREA (EEA)

The Baker Cypress ACEC is a unique botanical area. The Baker Cypress grove is a small disjunct population from the main population center over 90 miles to the southeast in northern California. This unique grove is the most northern population of any Cypress in the northern hemisphere making the Flounce Rock grove of world-wide botanical and ecological interest.

The ACEC was established in 1995 as a 10 acre area in Section 5 of T. 33S., R. 2E. that recognized the botanical importance of the Baker Cypress grove along with the historical, cultural, scenic educational, and wildlife values. The ACEC is located approximately 1/4 mile from Flounce Rock (see map 4, ACEC, page 91). A 1/4 mile trail leads from a parking area. The trail is maintained and provides access to the Baker Cypress Grove.

Previous land management activities have affected the grove. Two clear-cut harvest units were located on the northwest slope of the grove, one in 1956 and the other in the late 1980's. A cat line was dozed around the perimeter of the units and through the grove. The harvested units may have reduced protection from winds during winter storms from the northwest on the ridge top. During the winter of 1995/1996 the area was hit by a strong winter storm which saturated the soils and then covered the area with a heavy snow. The clear-cut unit to the northwest may have allowed the winds to penetrate under the stand canopy and uprooted numerous Baker Cypress and blew out the tops of many more.

The ACEC is within a current grazing allotment. Cattle graze the ACEC on a yearly basis. Impacts vary by year and the amount of time cattle graze the meadows. No restrictions have been placed on grazing activities within the ACEC currently.

Currently, a draft management plan has been developed for the Baker Cypress ACEC. The ACEC has been proposed for enlargement from 10 acres to 53 acres. The intent is to expand the ACEC to include surrounding lands which are potential habitat and similar in nature to the existing area. The additional area is withdrawn from timber harvest already and has few resource management conflicts.

An Environmental Education Area was established in the 1995 Medford RMP within Sections 5 and 8 comprised of 495 acres. This designation focuses management actions within the area towards general education objectives, scenic values, and restricts activities such as timber harvesting, off-highway vehicles (OHV) activity, and mineral activity.

FOREST HEALTH

Current Condition

Three structural elements within a forest ecosystem are critical in maintaining ecological diversity and complexity. These are:

Matrix - "The most connected portion of the landscape" **(not the same as the FEMAT "Matrix land" designation)**. It is generally the predominant vegetative type and therefore exerts the

strongest control over the movement of living and non-living things across the landscape (fire, wind, plants, people). The matrix affects the rate at which various disturbances move through the landscape.
Patches - Patches are distinct areas different from the general landscape around them.
Corridors - Provide routes between similar seral stages or vegetative types, corridors may include roads, riparian areas, streams, power lines, and timber.

Table 2. Lost Creek Vegetation Distribution- All Ownership

AG LANDS	EARLY SERAL (0-5"dbh)	MID SERAL (5"-11"dbh)	LATE SERAL (12"- 21" dbh)	MATURE SERAL (22"+ dbh)	OLD GROWTH (24"+ dbh or> 200 yrs. multi-layer)	NON-COMMODITY TIMBER LANDS
1%	65%	7%	4%	7%	6%	10%
843 ACRES	38,247 ACRES	4,183 ACRES	2,418 ACRES	4,431 ACRES	3,364 ACRES	5,743 ACRES

Matrix
The matrix forest stages of the Lost Creek WAU are defined as early-successional forest. Two size classes cover approximately 72% of the landscape and provide the strongest influence over landscape flows (see table 2 above).

Early Seral: Grass/forb to seedling/sapling, 0-<5" diameter. "from disturbance to the time when crowns close and conifers or hardwoods dominate the site. This stage may be dominated by grasses and forbs or by sprouting brush or hardwoods. Conifers develop slowly, gradually replacing grasses, forbs, or brush as the dominant vegetation. Forage may be present. Hiding or thermal cover may not be present except in rapidly sprouting brush communities" (Medford Proposed RMP, 1994, page 3-29). Douglas-fir and ponderosa pine are the principal planted species.

Mid Seral: Pole, 5"-11" diameter. "From the time crown closure occurs to the time when conifers would begin to die from competition. Stands are dense and dominated by conifers, hardwoods, or dense brush. Grass, forbs, and herbaceous vegetation is decreasing. Hiding cover for big game is usually present" (Medford Proposed RMP, 1994, page 3-29).

The early-successional matrix was initiated through logging and, to a lesser degree, fire. The composition, structure, and function of these early successional forests are somewhat different from those that would be initiated by natural causes. These differences include:

* fewer number of snags remaining, particularly larger diameter classes
* more soil disturbance from logging, road building, and site preparation affecting post disturbance plant succession
* reduction in amount, size, and distribution of woody debris

* planted species (8' x 8') spacing grid vs. natural (random) spacing. Douglas-fir and ponderosa pine are the principal species planted. Under natural conditions, the species mix would also include hardwoods and a higher proportion of shrub species. Trees are planted all at once vs. natural regeneration which occurs over time.
* the rate of physical/structural change is more rapid due to intensive silvicultural treatments
* large, fire tolerant, remnant trees are not present as a scattered stand component
* some plantations have a higher component of ponderosa pine than would naturally be found on the site

A landscape's stability is a measure of constancy in the absence of major disturbance. Seedling/sapling and pole size stands can be categorized as unstable as the rate of structural change is relatively rapid as opposed to stable, slow changing old-growth stands.

The matrix pattern is largely determined by the checkerboard ownership boundaries. Approximately 47% of the Lost Creek landscape is managed by the private timber industry. On these lands, the majority of merchantable overstory trees have been removed, leaving younger, unmerchantable Douglas-fir with lesser amounts of ponderosa pine, incense cedar, and scattered hardwoods. BLM managed lands (32%) have undergone harvest practices ranging from fire salvage to clear-cut, resulting in 29% of BLM ownership in seedling/sapling and pole sized stands.

Patches

Patches are areas distinctly different from the landscape around them. As a result of logging and fires, small sawtimber, large sawtimber, old growth stands, and non-commodity have become the "patches" within the Lost Creek landscape. Three types of forest patches and one type of non-commodity can be identified and described. The descriptions for small sawtimber, large sawtimber, and old growth stands apply to unentered/unmanaged stands. Where management has occurred stand conditions will vary.

Late Seral (small sawtimber, 11"- 21" diameter, dbh). Four percent (4 %) of the landscape. "Stand growth slows. Forest stands are dominated by conifers and hardwoods, canopy closure approaches 100% with stand growth decreasing. Stand diversity is minimal; conifer mortality rates and snag formation are rapid. Big game hiding and thermal cover is present. Forage and understory vegetation is minimal except in understocked stands or in meadow inclusions" (Medford Proposed RMP, 1994, page 3-29).

Mature Seral (large sawtimber, 21" + diameter). Seven percent (7 %) of the landscape. "Forest begins to develop structural diversity. Conifer and hardwood growth gradually declines. Larger trees increase significantly in size. Stand diversity gradually increases. Big game hiding cove, thermal cover and some forage are present. With slow growth, insect damage increases and stand breakup may begin on drier sites. Understory development is significant in response to openings created by disease, insects, and windthrow. Vertical diversity increases. Larger snags

are formed" (Medford Proposed RMP, 1994, page 3-29).

Old-growth (generally 200 years+, multi-size classes, and multi-layered). Approximately six percent (6 %) of the landscape. "This stage represents the potential plant community capable of existing on a site given the frequency of natural disturbance events. Structure, species, composition, and age distribution are dependent upon fire frequency. As mortality occurs, stands develop greater structural diversity. Replacement of individual trees lost to fire results in the creation of a multi-layered canopy" (Medford Proposed RMP, 1994, page 3-29).

Lands Withdrawn from Timber Harvest. Includes ten percent (10 %) of the landscape. Lands that are classified as withdrawn due to shallow soils and, usually, south aspects. Due to site conditions, these lands do not produce commodity timber products but the vegetation is stable unless modified by disturbance events. Growth and vegetative change is slow. Canopy closure is generally open though some areas may provide hiding and thermal cover for wildlife. During the winter these areas may be important for wildlife forage.

The small sawtimber stands are the result of a stand replacement fire approximately 80 years ago. Scattered larger diameter ponderosa pine, Douglas-fir, and incense cedar remain following the fire.

The large sawtimber and old growth stands show evidence of historic underburning and partial stand replacement fires. The frequency of underburns can be determined by the age and amount of seedling and saplings in the understory. In stands that have not experienced recent underburns, a well established sapling-to-pole size second-growth Douglas-fir and white fir stand is present. In the larger canopy holes, Douglas-fir has naturally regenerated.

The lands withdrawn from timber harvest are generally grasslands, meadows, or chaparral vegetative communities that have developed as a result of shallow soils or an extremely hot, dry environment. Fire occurs frequently on these sites. Due to harsh site conditions, the development of conifers is limited. The lands are vegetated with grasses, brush, and hardwoods which are better competitors than the conifers.

Compared to the landscape matrix, all three forest patch types are considered stable, with old-growth stands having the highest degree of stability. The older the stand, the less likelihood that the structure and compositional elements will change significantly over time, and any change that does occur is slow. The withdrawn lands are stable due to the site conditions. Without disturbance these lands develop into grass/brush/hardwood vegetative communities with vegetation change occurring slowly.

The majority of the small sawtimber, large sawtimber, old growth patches, and withdrawn lands within the Lost Creek landscape are located on federally managed lands. The checkerboard ownership pattern has resulted in a highly fragmented landscape. The patches are generally square

or rectangular in shape due to the checkerboard ownership patterns and rectangular shaped logging units, and soil depth and aspect of the nontimber-commodity areas. The location and amount of patches within the matrix has created a high degree of contrast, porosity, and edge effect across the Lost Creek landscape. Edge represents the interface area between two distinctive vegetative/size classes. Environmental conditions (temperature, light, wind, and humidity) are different within this area, resulting in a drier, windier microclimate along the stand edge. Generally, a 500 foot wide strip adjacent to the edge is affected. The altered microclimate in this area causes a successional change in the species mix and density of herbaceous vegetation and shrub species. Patches 25 acres or less are in effect all edge.

Corridors

Corridors provide travel routes for plants, animals, and people between similar size classes or vegetative types. Roads, riparian areas, and streams are the primary corridors in the Lost Creek landscape.

Reference Conditions

Forest ecosystems are complex, dynamic, and always changing. Changes occur as elements and processes are altered by both coarse filter (i.e., stand replacement fires) and fine filter (i.e., individual tree mortality) events. Ecosystems can adapt to these changes and can function well under a range of conditions. Within this "natural range of variability" biological and ecological functions are sustainable. When an element or process is outside of this range, that element and those depending upon it may not be sustainable (USDA, Forest Service, 1993).

Utilizing fire history information, existing age-class distribution, and forest survey documents, a general re-creation of vegetative conditions prior to logging can be made. From this baseline information, assumptions and inferences can be made specific to individual elements, process, or components and how they may have functioned under "natural" conditions.

In the Rogue River basin, it has been estimated that prior to logging, approximately 71% of the commercial forest land contained large size forests. This estimate is based upon detailed forest surveys completed during the 1930's. The pre-logging time frame includes the period prior to late 19th century and early 20th century logging. Large-size class is defined as Douglas-fir >20" dbh, ponderosa pine >22" dbh and white fir >16" dbh. Furthermore, approximately 89% of the large size class was in one large connected patch extending throughout most of western Oregon (see figure 1, 1933 Forest Paterns of Western Oregon, page 108). Mean patch size for deforested burn patches in the Rogue River basin was (Medford Proposed RMP, 1994, page 3-29) approximately 9,500 acres (Ripple, 1994).

Specific to the Lost Creek watershed; approximately 65% of the watershed was identified as large conifer forests. The remaining 35%, in the northwestern one-third of the watershed, was identified as non-commercial oak woodlands and lesser amounts of small conifer forests.

The natural range of variability is further defined in an ecosystem health study for national forest lands (USDA Forest Service, 1993). The Lost Creek watershed is part of the Upper Rogue River sub-basin that was analyzed. Although the analysis was focused only on lands administered by the Forest Service, the vegetative composition, climate and landform characteristics of the eastern two-thirds of the watershed are very similar to the adjacent Rogue River National Forest (RRNF) lands.

The analysis addressed the historic range, current range, and current mode of aquatic, riparian, and terrestrial elements. The historic range was defined as the conditions that existed before timber harvesting began in the early 1900's. Because of the same general geographic location, BLM and Forest Service managed lands probably had similar historic conditions as cited in the study. This does not hold true for in the information provided for the current range and current mode conditions. The study did not focus on the portion of the Upper Rogue sub-basin that included BLM and private lands. Because of the checkerboard ownership pattern and intensive harvesting activities on private industrial lands, it is probable that there would be a greater decline in "natural" conditions than estimated in the study. Therefore, that information is not valid for this watershed.

SUMMARY - Historic Range of Forest Stand Conditions

1. Riparian vegetation
   - Early-successional conditions - 10-40%
   - Late-successional conditions - 45-75%

2. Terrestrial vegetation
   - Early-successional/no snags - <2%
   - Early-successional/with snags - 10-40%
   - Late-successional/single layer - <2%
   - Late-successional/multilayered - 45-75%

Early-successional conditions are the stages in forest development that includes seedlings, saplings, and poles.

Late-successional conditions are the stages in forest development that includes mature and old growth stands, generally >80-100 years of age.

3. Vegetation pattern

a. The landscape pattern was uniform with late-successional forests providing large contiguous areas of interior forest habitat.

b. Fragmentation of late successional forests was limited and occurred in areas where stand replacement fires left large patches of "green" stands interspersed between fire killed stands.

c. The amount of edge between early and late-successional vegetation was low and occurred in areas where stand replacement fires provided the abrupt transition between early and late

successional forests.

d. Canopy openings were not uniform, but variable in size. The openings typically were larger, the result of stand replacement fires.

4. Insects and disease

Widespread vegetative changes due to insects and/or diseases were most likely minimal. Mortality was probably limited to individual trees or small groups of trees. Some insect populations may have increased to moderate levels following fires due to fire induced stress (cambial damage and/or crown scorch) or during long periods of drought. Root diseases were present and provided small gaps in the forest canopy. Large areas of root rot were probably minimal due to periodic underburns which maintained disease resistant seral species. Dwarf mistletoe, specifically in the Douglas-fir overstory was likely common but with minimal intensification. Periodic underburning maintained open stands of mixed conifers and hardwoods. Mistletoe brooms on smaller Douglas-fir trees probably increased torching and tree mortality, thereby regulating mistletoe severity and spread in the understory.

5. Frost

Vegetative damage caused by late frosts was likely minimal. Canopy cover provided protection against freezing temperatures in most areas except for openings created by stand replacement fires.

6. Pocket gophers

Gopher populations were likely at endemic levels throughout most of the watershed because of late successional forest conditions. Late-successional, dense canopy forests, harbor few, if any, gophers. Population levels may have increased in areas of stand replacement fires. Fires created openings and reset succession to early seral conditions. Post fire vegetation would have consisted of early seral broad-leaf herbs, the favored food of pocket gophers.

Forest Health - Interpretation

The trend within this watershed over the past 70 years has been one of structural, habitat, and species simplification. Some of the changes from historic levels include:

1. The current landscape pattern has been shaped predominantly by logging. Historically, the landscape pattern was a result of disturbances, such as fire, windthrow, insects, and disease that were partially regulated by environmental gradients such as, climate, soils, and landform.
2. Logging and road construction have created a landscape that is more fragmented with greater edge and patch densities than historic levels. Large blocks of mature forests are now mosaics of young plantations, mature forests, and forest stands modified by varying degrees of logging.
3. Reduced interior habitat for species associated with late-successional forests.
4. A shift in abundance and species composition of soil and canopy arthropods towards those most associated with early successional stands.
5. A shift from early seral species, such as ponderosa pine, to mid/ late seral species, such as, Douglas-fir and white fir, due to fire exclusion and the harvest of high value overstory trees.

6. Post harvest treatments have modified the natural process of vegetative succession. The temporal and spatial occurrence of herbaceous, shrub, and hardwood species has been altered by management treatments (i.e., slashing, burning, brushing, girdling, herbicides, scalping, fertilization). The treatments are not always representative of natural processes, and their effects upon long-term ecological health and processes is unclear.
7. Stand densities have increased, thereby increasing soil moisture and nutrient demands resulting in increased tree stress and larger numbers of trees predisposed to insect or disease attack.
8. The low thinning effect of fire is absent.
9. Vertical canopy structure has increased in existing late successional stands.

The cumulative effects of these changes have affected the ecological processes and functions within this landscape. The extent and the degree of change can be assessed by comparing the current conditions with the "natural range of variability". Within this "natural range of variability" biological and ecological functions are sustainable. Elements and processes outside of this range and those depending upon it may not be sustainable.

Table 3. Forest Stand Condition

FOREST STAND CONDITION	HISTORIC RANGE	CURRENT MODE
EARLY-SUCCESSIONAL/NO SNAGS	< 2%	75%
EARLY-SUCCESSIONAL/WITH SNAGS	10-40%	6%
LATE-SUCCESSIONAL/SINGLE LAYER	< 2%	5%
LATE-SUCCESSIONAL/MULTI-LAYERED	45-75%	14%

NOTE: Due to data gaps, the percentages shown for current mode are estimates only .

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Insects and Disease
Simplification of forest landscape pattern, structure and diversity may lead to increases in pest populations and pathogen occurrence. Homogenizing forest landscapes reduces natural controls and barriers that regulate the kind and extent of insects and disease. Older stands, with their complex array of tree and predator species, stand size, and high structural/age diversity are less favorable to pest outbreaks than are simplified forests created through past regeneration practices (Schowalter et al, 1988).

The pattern of forest communities and age classes influences the habitat of natural predators, distribution of food sources for insects and pathogens, and the ability of insects or diseases to survive and spread. Larger areas of uniform early-successional stands are present today than historically occurred. These stands have limited structural and species diversity and, if stressed, may be more susceptible to insect and disease outbreaks.

Frost
Openings created by logging have increased the amount of damage to seedlings and saplings caused by late frosts.

Pocket Gophers
Logging, specifically clearcutting, has created large areas of habitat favored by gophers. In some areas of the watershed, gopher populations are at epidemic levels and have hampered reforestation efforts.

SPOTTED OWL CONNECTIVITY

There are 16,190 acres of US Fish and Wildlife Service (USFWS) designated Critical Habitat for the Spotted Owl within this watershed that is outside the large LSR (see map 11, Critical Habitat, page 98). Management guidance for the level of timber harvest or habitat change may occur is not well defined. The US F&WS recommends that extra consideration for important owl sites and connectivity be provided within Critical Habitat. There is a large LSR located to the northwest of the Lost Creek watershed and another to the southeast on USFS lands. There is concern for providing adequate connectivity between the two LSRs.

JACKSON TRAVEL MANAGEMENT PLAN

Road use restrictions were implemented in the fall of 1995 on the north side of Lost Creek Reservoir cooperatively with ODFW (ODFW, BLM, and Boise Cascade). The plan is termed the Jackson Access Cooperative Travel Management Area (JACTMA). While mainly to benefit big-game habitat, the program also reduces soil erosion, trash dumping, and firewood theft. Most of the roads affected are natural surface. The plan has remained controversial with a portion of the public not wanting roads blocked.

FIRE AND FUEL MANAGEMENT

The watershed is currently characterized by highly fragmented stand types and ages. The federal forest land has some significantly different characteristics than that of the private forest land that result in a change in risk and hazard. The primary difference is the higher level of understory vegetation or ladder fuels. The private timber lands is primarily comprised of a two story stand with little coarse woody debris present that would increase fire severity or duration. The relatively flat topography of the land allows for normal post harvest activities that include tractor pile and slash burning after multiple timber harvest entries. As a direct result, the stands are generally maintained in an early seral stage and the understory vegetation is generally comprised of grass and forbs which, although contributing to high spread rates, have few long term fire impacts on the site. In addition, fine fuels are highly influenced by minor changes in environmental conditions such as humidity and seasonal precipitation. As a result, the current stand condition, topography, and local environmental conditions coupled with high road densities create an ideal fire suppression situation and a low hazard rating.

A large portion of the federal lands south of the A road consists of late seral or older stands with multi-storied canopy layer stands with an influx of true-firs in the understory layer. This portion of the watershed is at relatively low risk from severe, stand replacement type wildfire. The moderate fire hazard areas are early to mid seral stage stands that consist of multi-storied canopies, particularly those stands which have a high component of true fir. Those stands provide ladder fuels necessary to initiate crown fire events. Flat topography will assist in limiting these events. The federal lands normally receive slash abatement activities where regeneration harvests have occurred which reduces fire potential.

Both the south and north shores of Lost Creek Reservoir have a higher potential for catastrophic fires. That portion of the watershed that lies north of the A Road falls into an area that has been

identified by the Oregon Department of Forestry (ODF) as an area of Increased Resource Availability (IRA) (ODF Report, 1996). This area is identified for its higher fire potential resulting from a combination of factors that includes elevation, fuel types (fuel models, slope, and aspect), and response times. Although only 5% of all fires occur in these areas, 95% of all project fires are located in IRA identified zones (see map 12, IRA, page 99).

True-firs are unique in their characteristics that promote larger and more severe fires. Because true-firs are shade tolerant, they tend to have fuller crowns that grow to the ground. In addition, as true-firs mature and die, their rapid rate of decay creates snags and large coarse woody debris which are prolific in the production of fire brands. Spotting is a major source of fire spread in this stand type. Snags and coarse woody debris, especially true fir, contribute to a high spotting potential.

The primary ignition source in this watershed is lightning. Prevention efforts have little affect on fire starts in this environment. Protection measures modify the fuel profile and target the rate of spread, fuel type, and access. Current treatments that affect fuel profiles include, timber harvest prescription, post harvest fuel/slash reduction, and plantation management prescriptions. These activities do not change fire starts but do have the potential to reduce fire size and severity. As development continues to occur along the shores of Lost Creek and recreational activity increases, there will be an increasing probability of human caused fires.

Landscape Interpretation

Fire was the dominant agent of change in this watershed as is the case for most of the Rogue Basin. Traditionally, these stand types would have experienced low to moderate severity underburns and occasionally a stand replacement event would have occurred. Naturally occurring underburn would have been expected on an average 40 year cycle. With an interrupted natural fire cycle, fuels have built up to where a catastrophic stand replacement fire becomes a higher probability. The low to moderate severity underburns would have reduced the influence of true-fir in the watershed. Because this watershed experienced a longer fire rotation, true-fir would have survived to some extent and larger trees have always been present especially at higher elevations. In those periods of fire absence, the true-firs would expand its role in the eco-system, thereby promoting the higher severity stand replacement events.

CUMULATIVE EFFECTS

Transient Snow Zone (TSZ)

The transient snow zone ranges in elevation from 3500 to 4500 feet. This is the area where rainstorm events on accumulated snow pack are most likely to increase the magnitude of peak flows. The transient snow zone in the watershed occupies 15,617 acres. Approximately 5178 acres within the transient snow zone are forest openings with partial canopy closure. These forest openings occur where roads exist and where the overstory canopy of trees has been removed or thinned and the remaining stand of vegetation is inadequate to intercept snow and prevent the

accumulation of a snow pack.

Timber harvest has increased in the watershed since the 1950's resulting in more forest openings, particularly in the TSZ. Management practices such as clear cutting and road and skid trail densities have contributed to forest openings. These activities increase the potential for additional overland flow and degradation of stream channels from flooding and peak flows.

In the TSZ there are 1811 acres of forest openings on BLM lands and 2817 acres occur on non-BLM lands. The acres of openings for BLM land were determined from Forest Operations Inventory records. The acres on non-BLM land were determined by using aerial photography and satellite imagery. Road openings total approximately 549 acres as determined by GIS analysis. Forest openings account for 33% of the total land base within the TSZ in the Lost Creek WAU (see map 8, Transient Snow Zone Openings, page 95).

High Risk and Deferred Sub-Watersheds

The area south of Lost Creek Reservoir is characterized by high risk and deferred sub-watersheds (see map 15, 80 Year and Older Stands/Deferred Watersheds, page 102). High risk sub-watersheds are areas determined to have high cumulative impacts from past management activities. Cumulative effects analysis revealed that many of these sub-watershed were at high risk due to the combination of compacted acres, previous logging entries, and the high percent of area in the transient snow zone. Timber harvesting activities in the past were predominantly ground based (tractor) without designated skid trails. Typically, undesignated skid trails resulted in a high percentage of land in compacted acres.

Two areas in the watershed with the highest level of cumulative impacts were designated as deferred sub-watersheds by the Medford District RMP 1995 and are deferred from timber harvest and other management activities for ten years as a result of cumulative effects analysis (Medford RMP, 1995, page 42-43).

CHAPTER 3
LANDSCAPE RESOURCE COMPONENTS

HUMAN/SOCIAL ASPECT

Euro-American Exploration and Early Use

The first arrival of Euro-Americans into the Rogue River basin occurred in early 1827 when fur trappers of the Hudson's Bay Company's "Snake Country Brigade" traveled through the Rogue River valley. Led by Chief Trader Peter Skene Ogden, the expedition ascended the river toward its headwaters northeast of what is now Lost Creek Lake. Although Ogden himself did not travel any farther upstream than about the present day site of Shady Cove, some of his men pushed on until deep snow pushed them back a few days later. These men probably got up beyond the Lost Creek area to at least present day Prospect (LaLande, 1987).

Euro-American agricultural settlement in the Rogue River Valley, stimulated by the simultaneous discovery of gold in the nearby Siskiyou Mountains, began in the early 1850's. The Bear Creek valley was extremely fertile and it became the center of business and enterprise. However, during the 1850's-60's, with the main Rogue River valley being settled and converted to farms and orchards, more people began exploring the Upper Rogue area and it became a popular hunting area. During the 1860's, the high country became a popular summer grazing area for cattle from the valley ranchers.

The Rogue River has always served as a major travel route, first for the Native Americans and later for the military, settlers, miners, and loggers. The Fort Klamath Military Wagon Road followed an Indian trail and in 1865 passed by the Union Creek trail. The Union Creek trail was the best winter route to Fort Klamath. It went up the Rogue River and over the mountains at Union Creek. The Military Road became the Old Crater Lake Road.

Initial Settlement of Lost Creek Area

The first settlers to the Lost Creek area arrived in 1867 from Indiana. Mr. William Rumley, his wife Francis, and their daughter filed for a homestead in T. 33S R. 1E Sec. 25 around what would later become the community of McLeod. They received their papers in 1881. In 1868 the Uriah Gordon family moved into the area and became long term residents. In 1874 Mr. Wilder Friel, a farmer from Mississippi, patented 80 acres. In the mid 1870's, Carlos Goddard and his family moved into the valley and opened the first mercantile business in the region. They lived below Needle Rock. Soil in the Flounce Rock area was dry and rocky so the land in this northern part of the watershed changed hands often. The first recorded transfer of land was recorded in 1872. At this time, there was still no bridge across the Rogue River and the neighbors were forced to ford the river to enjoy visits of music and dancing (Weiss, 1991).

Settlement continued at a steady rate in the valley. The community under what is now Lost Creek

Lake was known as Laurelhurst. In 1886 the first wagons rolled on the newly cut Laurelhurst Road. In the same year, the first school on the North side of the River was built and called the Flounce Rock School or, more casually, "the school along the river." The first school on the south side of the River, the Lakehurst School, was erected in 1890 and used through 1936. Strong community bonds developed between the residents and they enjoyed many neighborhood get-togethers. The first Post Office in the area was established in 1890 and the second in 1900 (Weiss, 1991).

In 1899 the Peyton covered bridge was built where Laurelhurst Road crossed the Rogue River. This joined Laurelhurst Road with the Fort Klamath Military Road, later highway 62. In 1910, the California Oregon Power Company began buying land along the Upper Rogue River and in the Prospect area to facilitate transportation through the area (Weiss, 1991).

In addition to opening up the Upper Rogue to future development, the early homesteaders affected the land around them by clearing areas for farms and grazing. The Cascade Range Forest Reserve report of 1900 noted that every township showed fire scars, probably from agricultural burning and some residual scars from early Native American burning. Euro-Americans burned to facilitate hunting, decrease underbrush for ease of travel, burn grass to increase feed/hay, and to clear land. Residents also logged their property to build houses and for firewood. Hunting was an important skill and, especially during the depression, an essential part of their life.

Logging and the Depression

Sugar pine shake-makers had been in the woods in the southern portion of the watershed for years and had left areas of the forest littered with rotting sugar pine which was rejected because the grain wasn't straight enough to split well.

In the 1920's, mill activity in the area increased. The Browns-Olds Mill stood on the west end of Laurelhurst Road. This mill was active until it burned in the 1930's and their activities moved to Rogue River. The Hoskins Mill and several tie mills remained active in the area. In the 1920's and especially 1926, more families pressed into the area.

The Depression hit the Laurelhurst area families hard as there were few options for work. In order to survive, the families learned how to better depend on the resources around them, such as wild game, and relied upon bartering. A large strawberry field helped provide employment for many in the area and helped the area to survive the Depression.

The economy began to stabilize during the 1930's and work was available as boating and fishing guides in the budding recreation industry. In 1935 the Upper Rogue Grange was built and the strong community ties continued to grow. In 1937 the State made the initial purchase for Laurelhurst State Park and it became a popular place for local residents and tourists to recreate. Later, the highway was widened between McLeod and Prospect and facilities were added to the

park as well as the McLeod Wayside.

During and after World War II, mill construction increased to accommodate the expanded market. One of the largest and most successful mills in the area was the Esten Mill on Rumley Creek between 1946-1950. In the 1950's, many of the mills closed due to the lack of good quality timber. Residents moved down to Medford and White City to work at the larger mills after the local mills closed.

The Lost Creek Dam

Push for the construction of a dam on the Upper Rogue began in the late 1950's. Local residents resisted the efforts since it would flood a large portion of the valley, residences, and original homesteads. The flood of 1964 caused huge amounts of damage to those living on the Rogue River and in the surrounding valley. There was less resistance by the locals to dam construction after the losses from the 1964 flood. In 1977 the Laurelhurst community disappeared as work was completed on the dam and the valley flooded. The name of the dam was changed in 1996 to the William L. Jess Dam, to honor one of the original project proponents.

Early Settlement of Butte Falls Area

The southeast portion of the watershed incorporates land north of the town of Butte Falls and was more strongly influenced by the activity associated with Butte Falls than with the Laurelhurst community.

Ranchers began settling the "Big Butte Country" in the late 1850's. The early residents of this portion of the watershed were mainly cattlemen with homesteads in the lower meadows who herded their cattle to the high country during the summers. The first Post Office in the area was established in 1878 and served the few homesteads that were there. After 1900 a new wave of settlers came in and began clearing timber to build cabins and plant gardens. This "proving up" of their land allowed them to obtain the title to 160 acres of timber land. Many of these claims were later abandoned and sold to timber companies who logged them.

In 1905 Bert R. Harris was attracted to the Butte Falls area and realized the potential for power generated from the 15 feet falls on Big Butte Creek. In 1906 Harris built the area's first mill on the banks of Big Butte Creek and laid out a 55 acre manufacturing town. By the end of the year, a tent city was erected where Butte Falls now stands. By 1911 the town was well established with a restaurant, barber shop, inn, impressive U.S. Hotel, billiard halls, target shooting gallery, and athletic club for sports and community activities. In 1911, six years after it had been started, The Pacific and Eastern Railroad finally completed the twenty-one-mile route to Butte Falls. Not only did this usher in a means to make the woods around Butte Falls receptive to the lumber market, it introduced the tourist industry to Butte Falls.

Lumbering in Butte Falls

Harris' original mill was replaced by a larger one which stayed busy until after World War I by

supplying Douglas-fir railroad ties for the war effort in France. In 1918 the mill ran out of timber and shut down, also shutting down the rail road into Butte Falls. The growing need for lumber in the Rogue Valley made it desirable to enter into the Big Butte country again. In 1922 two lumbermen fairly new to the area combined their holdings and created Brownlee-Olds Lumber Company. Brownlee-Olds inherited the first major Forest Service sale in the Upper Rogue region when they bought the previous companies out. They continued to log this land, as well as land they owned, and shipped logs on the railroad to the mill in Medford. This changed the job market in Butte Falls; no longer were their positions for millworkers, but for timber fallers and choker setters instead.

The stock market crash of 1929 was a final blow to the dwindling lumber industry and demand virtually disappeared. This resulted in widespread layoffs, stockpiling of much lumber, and a break from harvesting. Production was significantly cut back and eventually shut down for a few months. In 1931 the Brownlee-Olds Lumber Company defaulted on their bonds and in 1932 it was sold and became the Medford Corporation (MEDCO). MEDCO continued to build their assets and bought more land throughout the northwest. The 1940's witnessed a revitalization of the lumber industry as demand increased again, and jobs along with it. During the war years, the government had purchased the majority of MEDCO's timber, but the demand in the domestic market quickly replaced it after the war was over. By 1944 MEDCO had cut most of its mature timber and a new era began, the decrease of railroad logging and the increase in utilization of federal timber. The years of timber activity had produced 70 miles of track in the woods surrounding Butte Falls. In the late 1950's the use of motorized trucks and better roads resulted in the removal of many spur lines. Logging trucks hauled the timber to Butte Falls where it was loaded onto the railroad and shipped to the Medford mill. In the middle 1960's MEDCO stopped railroad shipment of logs and timber was trucked to the Medford mill. The end of railroad logging brought a change in the way that MEDCO managed and cut their timber land.

MEDCO logging activity continued until 1996 when the company was sold and the assets were divided between four timber companies. The turnover will affect the way that the timber is managed in the watershed by the private companies but will also affect the way that the BLM manages their land as they consider the cumulative impacts of past forest practices in the watershed. Years of timber activity in the hills north of Butte Falls, which is the southeast portion of the watershed, has produced a landscape dominated by second or third growth forests on the private lands. Private logging activities have responded directly to the demand for lumber. As a result, much of the harvestable timber has been removed from the private lands, and along with it the jobs. The community of Butte Falls is no longer predominantly made up of MEDCO employees with regular and predictable jobs centered on removing timber from the woods. Loggers now take smaller sales and contract their work. In addition, "special forest products" such as Christmas trees, boughs, burls, and mushrooms are also extracted from the woods north of Butte Falls.

TERRESTRIAL ECOLOGY

Special Status Plants

The Medford District is one of the most botanically diverse areas in the United States. Thirty-three Special Status Plant Species are known in the Butte Falls Resource Areas on 213 sites. Lost Creek watershed has very few rare plant species. Special Status Plant surveys have been conducted on approximately 2615 acres in the Lost Creek Watershed. Eight (8) Special Status Species were discovered on ten (10) sites (see Appendix 3, List of Special Status Plant Species and Potential Special Status Plant Species, page 4).

The most unusual plant species in the watershed is the Baker Cypress (Cupressus bakerii). This population, a disjunct grove from the main population center 90 miles away at the corner of Modoc, Shasta and Siskiyou counties, California represents the northernmost population of Cypress in the northern hemisphere. The Baker Cypress are growing along the ecotone between the Douglas-fir/white fir forest community and open meadow. Many Baker Cypress are growing underneath the canopy and appear suppressed due to shading. The crowns of these individuals are very sparse and bending toward the open meadow and their boles are very thin and out of proportion to their height. The Cypress on the edge of the meadow are healthier and growing more vigorously. The crowns are healthier and in balance with the trunk. However, many of the tree trunks have old evidence of bole damage which may be the result of elk or deer rubbing.

There is a noticeable lack of regeneration of Baker Cypress. The grove appears to be at significant risk should a catastrophic event occur to the stand. No new seedlings have been observed for decades. In 1992 Baker Cypress seedlings were grown at Charles A. Sprague Seed Orchard (CASSO) and planted around the edge of the grove. Garlic deer repellant capsules were clipped to the seedlings. In the spring of 1996 severe browsing was observed on the approximately 30 remaining seedlings. Only 3 or 4 seedlings appear to be established with a low risk of mortality. During the winter of 1995-1996, approximately 20 large Baker Cypress trees were uprooted or had their tops snapped.

In 1997 an inventory of all individuals was conducted on the grove and includes the number of trees, height, diameter, percent crown, vigor, and damage (both bole and crown).

Below is a brief description of the most frequently found Special Status Plant Species and habitat requirements for each of the special status species:
Cypripedium montanum (Mountain lady's-slipper) is a showy flowered orchid dependant upon conditions associated with later successional forest communities. They are terrestrial species adapted to partial to full canopy closure with a moderate accumulation of organic debris. There appears to be a mycorrhizal association also.

Allotropa virgata (Candy Stick) is a saprophyte generally found in mid and late-successional stands. The plant is terrestrial and very colorfully striped red and white. Habitat conditions vary

from relatively open rock outcrops with shallow soils and moderate organic debris to more closed canopy sites with deeper soils.

Sedum radiatum depauperatum (Depauperate Stonecrop) is a succulent which thrives on shallow soils, talus sites, or rock outcrops. Generally, it tolerates droughty conditions well and thrives in full to partial sunlight.

Plagiobothrys glyptocarpus (Sculptured Allocarya) is generally a riparian associated species and occurs in open areas along the margins of seasonal or perennial wetlands. Many times it is found growing on the edge of basalt dominated stream channels and flowers throughout late spring and early summer as seasonal flows evaporate. The numerous flowers are small, white, but somewhat showy as the raceme uncoils.

Scribnaria bolanderii (Bolander's grass) is a rather inconspicuous native grass, generally associated with seasonally wet areas or seeps on rock cliffs. Known locations occur on sandstone and basalt rock outcrops and areas with shallow soils. Bolander's grass has been found at scattered locations from southern California to Washington.

No surveys for Survey and Manage non-vascular plant species have been completed within the watershed. It is unknown whether any species occur within the watershed, although it is likely some lichen, bryophyte, and fungi species will be discovered. The watershed lies within the range of various species where habitat occurs.

Terrestrial Wildlife

The Lost Creek Watershed is different from others in the resource area by the following:

1. The presence of a designated Spotted Owl Critical Habitat Unit (CHU) that is outside a large Late-Successional Reserve (LSR).
2. The need to maintain a late-successional habitat corridor between two large LSRs.
3. Lost Creek Reservoir increases the amount of recreational visitor pressure on the north portion of the watershed.

A list of species found in southwest Oregon that are officially listed in various sensitive categories are shown in accompanying Appendix 3, Table 1, page 6. That table also indicates presence or absence of the species in this watershed, quality of habitat available, and what level of survey has been done. Accompanying appendix 3, page 11 briefly describes the habitat requirements for each of the special status species.

Federally Listed Species

Spotted Owl

Active Sites: Approximately 90% of the watershed is within a spotted owl density study area that was intensively surveyed annually by Oregon State University and BLM from 1990 through 1995. The remaining 10% either is non habitat or was surveyed less intensive. There are 14 historic owl

sites within the watershed with 10 of these active in either 1995 or 1996. One new site was discovered in 1997. Seven of these sites have produced young in at least one of the past six years. Details on occupancy and reproduction at these owl sites are portrayed in wildlife Appendix 3, table 2, page 20. Twelve of the sites are on BLM managed lands, and all but the new site has a designated 100 acre core, to be managed as LSR. The Northwest Forest Plan states that owl sites discovered after January 1994 are not mandated to receive a 100 acre core. Another site is on private timberland and has no reserve. The last two sites are on US Forest Service lands. The density of historic and active owl sites is average for southwest Oregon. Two sites produced young in 1997, vs. four in 1996, and none in 1995.

Suitable Habitat: Of 18,300 acres of BLM, 3300 acres are classified (see map 10, Spotted Owl Habitat, page 97) as spotted owl nesting habitat (McKelvey 1), 4100 acres are owl roosting/foraging habitat (McKelvey 2), for a total of 40% of the BLM land being considered "suitable" owl habitat for nesting/roosting/foraging (NRF). Another 2350 acres (13%) are dispersal habitat (class 5 & 6). For the 2115 acres of USFS, 320 acres are NRF, with another 990 acres being dispersal habitat. There is negligible additional suitable habitat on other ownerships, for a total of approximately 13% NRF habitat within the 59,200 acre watershed. There is considerable dispersal habitat remaining on the other ownerships. Due to logging over the past 20 years, quantity and quality of owl habitat has been declining.

Critical Habitat: There are two spotted owl critical habitat units in the watershed, as designated by US Fish & Wildlife Service (USFWS) in December 1991. OR-36 (Summitt Prairie) encompasses 8146 acres (6076 ac BLM, 66 ac USFS) in portions of 14 BLM and one USFS section (see map 3, Connectivity, page 90). OR-34 (North Lost Creek) mostly overlaps the large Elk Creek LSR 222, but 8144 acres (4910 acres on BLM) covering portions of 13 BLM sections are outside the LSR and within the Lost Creek watershed.

How Critical Habitat is to be managed is not clearly spelled out in policy. In discussions with Joe Burns of USFWS, the CHU has been designated to provide additional habitat protection for spotted owls (see Appendix 3, Terrestrial Wildlife, Clarification on Critical Habitat Designation, page 4). The CHU can augment connectivity between LSRs, and/or provides additional protection for specific owl sites. There are five sites within CHU OR-36 (Summitt Prairie) and 3 within CHU OR-34. Two of these sites are already within Connectivity block sections.

The concern for connectivity on a regional basis is to provide a genetic interchange corridor between large LSRs 222 (Elk Creek) diagonally extending to the SE to LSR 226 (Middle Fork/Sky Lakes). This can be accomplished by leaving 80-100 acre blocks of older seral habitat as connectivity "nodes" to augment existing connectivity blocks, 100 acre owl cores, and Riparian Reserve lands. Such linkage blocks can also augment the ROD requirement to maintain 15% of federal lands in older seral condition.

Active owl sites within the CHUs that merit added protection above the 100 acre minimum for

matrix lands are Old Lost One, Smith Creek, and Blue Goose. There are other owl sites within the corridor, but their ability to support successful nesting has already been compromised by timber harvest. The Taggarts Creek site was within the originally proposed (August 1991 Federal Register) CHU boundary, but was dropped from the final. This site also deserves extra acreage in the core. Taggarts Creek and Old Lost One were both formerly designated as Spotted Owl Management Areas (SOMAs) with 2200 acres reserved from harvest, but this designation was dropped in the current Forest Plan.

To maintain the corridor between LSRs, the four owl cores (Taggarts Creek, Old Lost One, Smith Creek, Blue Goose) should maintain a 120 to 150 acre core (vs. the minimum 100 acres) of no harvest with light touch management in adjacent stands. Additional connectivity nodes within the corridor should be identified where a light touch thin-from-below would be employed to maintain & enhance old growth/late seral characteristics. Specific node units (stepping stones) can be switched over time in a long term rotation.

Bald Eagle

There are two known bald eagle nest sites, one near Lost Creek Reservoir, and the second near Medco Pond. Productivity history is displayed at the bottom of Appendix 3, table 2, page 20 . Management guidance around eagle nests is discussed in Medford RMP, 1995, page 55: "Comply with the Pacific Bald Eagle Recovery and Implementation Plan. Within one-half mile of active bald eagle sites... minimize human disturbance between February 1 and August 15. Retain requisite forest habitat characteristics including large trees, snags, and at least 50% canopy closure. Protect the core area ... allow no planned timber harvest except to benefit bald eagle nest habitat, no new road construction ... Manage one block of at least 80 acres for nesting habitat within one-half mile of (Lost Creek Reservoir) to provide for future population expansion." Table 5 on page 57 of the Medford RMP goes on to say, "manage approximately 30 acre core area around nest sites. Develop HMP (Habitat Management Plans) for sites." The ideal location for the 80 acre expansion nest area is section 14 & 23 on the west shore of the reservoir. Each of the two nest sites has had a shift to a second nest tree, but the alternate was within 150 yards of the original. Nest locations have remained stable as compared to spotted owls which can shift ½ mile from year-to-year. Creation of man made reservoirs such as Lost Creek with a variety of fish prey species has increased bald eagle nesting opportunities within SW Oregon as eagle populations rebound from the pesticide crisis of the 1950's and 1960's. This watershed has the potential for only one more nesting pair, which would be at Lost Creek Reservoir (see Appendix 3, Terrestrial Wildlife, Table 2, page 20).

Peregrine Falcon

There are two cliff areas that could provide suitable nesting substrate for peregrines, but no birds have been detected there on annual opportunistic surveys. Birds from a nest site in an adjacent watershed make foraging sorties within the WAU. Peregrine nesting has been on the increase in Oregon, so birds could be expected to locate on one of the cliffs in the next decade. A site

specific management plan could then be formulated. The peregrine population in Oregon has slowly been recovering, from one pair in 1980 now up to 55 sites known in 1997.

Other Raptors

Golden Eagle

There is one historic nesting cliff on private land, occupied by nesting golden eagles up through 1993. These eagles were absent in 1994, 95, 96, 97 and may have shifted to an undetected tree nest. There has been heavy logging in the vicinity over the past five years. The Medford RMP, page 46, outlines protection measures for a 30 acre core around a nest.

Northern Goshawk

Two nests were discovered in 1997 surveys with historic sightings at two other locations. Over 3,000 acres of potential habitat were surveyed to interagency protocol standards in 1997 in the watershed. Due to difficulty in detection, there are probably several more nesting pairs. Guidance for nest site protection is provided in Medford RMP, page 57. Population trends and densities for SW Oregon have not been well studied, and management protection guidelines are not well defined. Two Coopers Hawk and two Sharp Shinned Hawk nests were also located in the 1997 survey. Goshawks were proposed to listing by USFWS in September 1997. A determination of whether or not to list as threatened or endangered will be made following a one year review period.

Great Gray Owl

The NW Forest Plan, 1994, page c-21 has designated the great gray as a Protection Buffer species with two years of surveys mandated in suitable habitat before commencing ground disturbing activities such as timber sales. There had been no historic detections of great grays in the watershed, but ten survey routes were run in the most suitable habitat in 1997. One nesting site was located, but the nest failed. Great grays generally nest in timbered stands within 1000 ft of meadows. Clear-cuts up to 5 years old, ecologically, serve as meadows. Owls are not necessarily dependent on older seral stages and may find suitable platforms for nesting (snap outs, cavities, old goshawk nests) in shelterwood stands or riparian buffers. Current interagency protocol requires surveys in suitable habitat above 3,000 feet elevation. The nest in the watershed was at 4800 feet. Nests have been discovered in Jackson County as low as 2200 feet. Great grays are difficult to detect using standard tape recording surveys. They hoot softly, do not defend a large area, and are thought to shift their center-of-activity from year to year.

Flammulated Owl

One survey route was run in 1995 with no responses, but they probably occur in the watershed.

Osprey

There were 26 active osprey sites in 1995 within 1¼ miles of Lost Creek Reservoir, and at least 12 of the sites produced young. The 1997 helicopter survey found 30 active sites. Thirteen nests

produced 21 young. Another 13 nests failed, and success was undetermined at the remaining four. Use of specific nest trees shifts from year-to-year as some nests or trees blow out over the winter months. Ospreys return from migration to Jackson County in late March and depart in September-October to winter in Central and South America. As long as nest trees and potential alternate nest trees are maintained, forest management activities can take place nearby as long as seasonal restrictions within 1/4 mile are employed from March 15 through August 15. Ospreys are almost exclusively fish eaters, so they spend most of their time near the reservoir, where they appear to be tolerant of recreational human disturbance. Birds at nest sites away from frequent human activity are much more susceptible to abandonment of the nest due to disturbance. All but one of the nests at Lost Creek are on BLM, Corps of Engineers (CoE), or State Parks lands. There used to be more nests on private timberlands, but following logging, there were no suitable trees remaining to replace the old nest trees as they blew down over the years. The osprey population increased rapidly following filling of the reservoir in 1978, and probably reached its carrying capacity for nesting birds in about 1992-93. Most broods are 1 or 2 chicks, whereas sites in less dense areas are more likely to produce broods of 3 to 4 young.

Big Game

In the Medford RMP, 1995, 3580 acres (1760 acres BLM, 340 acres Corps) on the north side of Lost Creek Reservoir (see map 11, Big Game Mangement, page 98) were designated as a big-game management area to be managed to maintain and enhance winter range for deer and elk. ODFW with CoE have undertaken several seeding and fertilization projects to improve foraging habitat for elk. There have been several additional seeding projects on private meadows. With cooperation from Boise Cascade, BLM, Oregon State Police, and CoE, ODFW in fall 1995 introduced the Jackson Access and Travel Management Area (JACTMA) plan to restrict vehicular access to the area north and west of Lost Creek for 7 months of the year to reduce disturbance and poaching pressure. Goals of the plan also include providing quality hike-in hunting and a reduction in soil erosion and road maintenance. Several public groups are vocally opposed to such road use restrictions. Most of the closed roads are unsurfaced jeep roads that are not maintained. In the fall there are many temporary traditional hunting camps throughout the WAU.

ODFW (Thiebes, personal communication) says Roosevelt Elk populations are increasing slowly, and are currently at management objective levels here, but need to increase on adjacent USFS lands in the rest of the Rogue Management Unit. Bull ratios are healthy at 12 to 13 bulls per 100 cows currently (minimum target is 10). Calf ratios are ok. Half of an ODFW elk census route is in the watershed. There is a resident elk herd using the meadow habitat in the big-game management area north of the lake. Blacktailed Deer are 15% below target population levels in the Rogue Unit. Buck and fawn ratios are ok. ODFW runs one herd composition census route in the watershed in the fall, and another in the spring. Deer migrate into the area in winter from higher elevations on USFS toward Crater Lake. Poaching pressure is medium to high. ODFW would like to see more roads closed in the watershed.

Cougar and black bear populations are high.

Game Birds
There are no game bird census routes in the watershed, but grouse and quail populations are thought to be stable. ODFW has had several wild turkey transplant releases from 1992 to 1994 on private lands in areas north of Lost Creek and at Carney Flat (near Medco Pond). The turkey population is expanding.

Red Tree Vole
Survey and Manage species, NWFP ROD, 1994, surveys are now mandated (IM #OR-97-009, 11/4/96) for ground disturbing activities beginning in 1997 unless more than 40% of the federal ownership can be maintained in suitable red tree vole habitat (defined as same as McKelvey 1&2 owl habitat). Currently, the BLM acreage in the WAU is right at 32%, and the USFS is at 4%. BLM is required to survey any area below 4300 ft (all but 4 or 5 sections of Round Mountain/ Summit Prairie). Survey protocol is to run 300 ft of search transect per acre. There were no detections of voles on surveys of 3000 acres of suitable habitat in the watershed in August 1997.

Molluscs
Surveys for Survey and Manage molluscs species are to start prior to ground disturbing actions in FY99. There is a high probability of some of these species such as fluminicola and prophysaon being found in the watershed, but no surveys have been done.

Special Habitats
Cliffs - There is one major cliff complex at Flounce Rock, which is non federal. This area could provide habitat for raptors (nesting and soaring), bats in the crevices, and amphibians on the talus slope at the base of the cliffs.

Caves - There is one known cave, which could provide habitat for Townsend's big-eared bats. There are no documented old mine adits.

Marsh - There is one complex of beaver dam pools in flats at Parsnip Creek/Beaver Dam Creek. This swampy area is the only such large habitat in the resource area, and is important for waterfowl, shorebirds, and turtles. Besides Medco pond, there is one other large pond with emergent vegetation on private land in section 7, a mile west of Flounce Rock.

Wildlife Synthesis & Interpretation
Previously, there was more old-growth habitat in the watershed. Remaining suitable owl habitat is becoming fragmented to the point that, although the total acres appear sufficient, they are less valuable to core dependant species (that need larger blocks to prevent degradation of habitat due to edge effect). The density study has shown owl numbers to be declining. Timber harvest adjacent to 100 acre owl cores on Matrix lands will reduce these pairs' ability to successfully raise young. According to the Northwest Forest Plan, the role of the Matrix lands in owl recovery is to

provide dispersal habitat (vs. nesting opportunities) between the large LSRs. In this watershed via the CHU and by enlarging several owl cores (Taggarts Creek, Smith Creek, Blue Goose, Old Lost One), there is an opportunity to enhance a dispersal corridor that benefit more late-successional species. Maintaining additional connectivity nodes (40 acre units of 120+ age older habitat) within the corridor will enhance opportunities for genetic interchange. Owl numbers in the watershed will continue to decline due to habitat fragmentation.

Elk populations should remain fairly stable and close to optimal levels for the types of habitat available. Clearcutting on private timberlands will provide forage to augment the meadows. Federal Riparian Reserve lands and 100 acre owl cores will provide thermal and hiding cover. Population levels for deer and elk are dependent not only on habitat quality and quantity, but also on numbers of hunting tags issued and the extent of illegal harvest. Blocking dead-end road spurs reduces poaching opportunities. Maintaining a 25 foot wide brush and conifer strip alongside major roads, such as the A and B roads, reduces sight distance to the side, and thus reduces poaching opportunity.

Cattle Grazing

Licensed grazing on public lands has been an acceptable practice for decades, and both the Summit Prairie and Lost Creek allotments have had grazing leases issued since the formation of the Medford District. For the most part, the grazing licenses have not changed. The lessees have changed, and since the construction of the Lost Creek Dam, the available acreage has changed, but that is about all. The same numbers of livestock have been turned out annually, with minor fluctuations due to weather, financial circumstances, or events that would prohibit the use of public lands (i.e., Burnt Peak fire, 1987).

Prior to BLM agency administration, livestock grazing was unregulated. There were no limits as to how many livestock were turned loose, or where. There may have been agreements between ranchers as to where they were allowed to graze their livestock, but this is purely speculative. Due primarily to steepness of terrain, livestock use was restricted to the Rogue River bottomlands, and any other small openings in the forest that sustained a grass or forage component.

Of the Summit Prairie allotment, only two pastures (out of 10) are involved in this analysis. The Round Mountain pasture (closest to Lost Creek Reservoir) is used by one rancher. The livestock use consists of the following:

73 cows	06/01 to 09/30	BLM	293 AUMs
33 cows	06/01 to 09/30	C&D Lumber*	134 AUMs
16 cows	06/01 to 09/30	Lone Rock	62 AUMs
14 cows	06/01 to 09/30	Rough and Ready	58 AUMs
48 cows	06/01 to 09/30	Superior	191 AUMs

*Leased from Timber Companies through annual agreement.

The Parsnip Creek pasture, further to the southeast, is used to the following degree by several ranchers:

68 cows	06/01 to 09/30	BLM	150 AUMs
17 cows	06/01 to 09/30	C&D Lumber	38 AUMs
32 cows	06/01 to 09/30	Lone Rock Timber*	69 AUMs
28 cows	06/01 to 09/30	Rough and Ready	60 AUMs
26 cows	06/01 to 09/30	Superior	55 AUMs

*Richard Hubbard base property leased by Ron Anderson

Almost the entire area of the above pastures are within the boundaries of the Lost Creek WAU boundary (see map 5, Intersecting Grazing Allotments, page 92), and therefore the entire livestock use indicated above can be considered an impact to the other resources within the WAU.

The Lost Creek allotment lies to the north of Lost Creek Reservoir and has three ranchers who are licensed to graze their livestock in the allotment. One rancher grazes his cattle in the northern portion of the allotment around Alder Creek. Another rancher grazes his cattle around Yellow Peak and Tatouche Peak to the west of Lost Creek Reservoir. The other rancher grazes his cattle within the area hash marked on the Intersecting Grazing Allotment map 5, page 89, south of Burnt Peak and around Flounce Rock. Grazing occurs only during the latter part of the grazing season. This total grazing use reads:

84 cows	04/01 to 10/15	100% BLM	382 AUMs
178 cows	06/01 to 10/15	100% Boise*	491 AUMs

*Leased from Boise Cascade through annual lease agreement

Within the Matrix land allocation, openings which will facilitate more acceptable livestock distribution patterns are more likely to occur. Future silvicultural practices would most likely be designed to incorporate clearings. Such openings would provide for future grazing opportunities.

In addition to this management practice on BLM administered lands, the same or more impactive practices may be carried out on private timber lands. The practice of heavy logging on private lands will open even more lands to grazing opportunities which will have several consequences. The first is that livestock grazing on private timber lands will reduce pressure for forage placed on public lands. This grazing pressure may actually assist private timber growers by eliminating competition for moisture with young tree seedlings. The big drawback to this is that some of the smaller tree seedlings may get minor grazing pressure.

RIPARIAN ECOSYSTEM

The riparian zone is a unique ecosystem that interacts between the local climate, geology, hydrology, and vegetation. The physical environment is modified by parent material and landform

features expressed across the landscape by changes in slope, aspect, and elevation. Riparian vegetation is an indicator of the physical environment modified by soil type, temperature, and moisture. Riparian vegetation becomes more important as elevation decreases, summer daytime peak temperatures increase, and precipitation decreases.

The importance of the riparian zone is expressed in biological complexity and richness of the vegetation and the dependance of animal species on the riparian zone. Various studies site the importance of riparian zones (see bibliography, Riparian Ecosystem, page 127). Up to 80% of plant and animal species are dependant upon the riparian zone during all or a portion of their life cycle. Plant species, such as red alder, cottonwood, Oregon ash, bigleaf maple, willow species, vine maple, rocky mountain maple, Douglas spirea, saskatoon, service berry, mock orange, ninebark, oceanspray, dogwood, and a variety of ferns, mosses, lichen, and liverworts are indicator species found in Lost Creek Watershed determine the extent of riparian vegetative zone.

The overstory conifer canopy is a key component of the riparian zone. The protective layer shelters streams from direct solar radiation and large diurnal temperature changes during the summer. The over-story riparian canopy acts as an insulator between the hot, dry air mass above and a cooler, moist air mass underneath. In addition, the canopy creates a moderated environment where plant and animal species dependant upon high humidity can survive. However, mortality of conifer trees in the riparian zone is many time 50% to 100% higher than in the uplands. Usually, a second or third canopy layer occurs within the riparian zone in Lost Creek Watershed. These canopy layers, generally, are comprised of different heights of hardwood and brush species. Each canopy layer provides additional diversity and protection to the aquatic system and habitat for animal, bird, and insect species.

Riparian vegetation helps retain the physical structure of stream channels by moderating stream flows and reducing the velocity of stream energy during flood events. Roots protect the integrity and stability of stream banks especially during floods. Bank vegetation tends to redirect flood currents away from erodible stream banks and reduces direct hydrologic forces. Vegetation captures rock and debris and many times creates temporary diversions of accumulated material.

Coarse wood provides a variety of physical and biological functions. However, the lack of coarse wood in local stream systems is most likely the key most deficient component across Lost Creek Watershed. Large wood creates diversity and complexity within the riparian zone and stream system. Particularly important is the ability of coarse woody debris to retain moisture during summer droughts and act as refugia for plant and animal species that require cooler and humidity conditions to persist. Hiding and foraging habitat is created for many terrestrial animal species, large and small. Hydrologic processes are altered by the amount, size and quantity of coarse woody debris. Energy is dissipated and/or redirected onto the flood plain during flood events. Coarse wood, many times, plays a key role in reshaping the stream channel by redirecting hydraulic energy and altering channel characteristics. Debris accumulates periodically, significantly influencing a channel reach.

Riparian Vegetation

In Lost Creek watershed grand fir, Douglas-fir and western hemlock are common conifer species along streams which provide cool, moist and shady over-story canopy conditions. More typical riparian vegetation found in Lost Creek watershed includes red alder, cottonwood, Oregon ash. bigleaf maple, willow species, vine maple, rocky mountain maple, Douglas spirea, saskatoon, service berry, mock orange, ninebark, oceanspray, dogwood, and a variety of ferns, mosses, lichen and liverworts in understory and ground vegetative levels. Where no overstory canopy exists from the timber harvesting activities or road openings, riparian vegetation is characterized by red alder, willows, and maple vine.

Many rare and unusual species such as mallow (Iliamna latibracteata), numerous Monkey-flower species (Mimulus spp.), popcorn flower (Plagiobothrys glyptocarpus), Howell's false caraway (Perideridia howellii), and Bolander's grass (Sribneria bolanderii) occur in riparian or wetland habitats. Yew (Taxus brevifolia) is generally restricted to riparian areas in Lost Creek watershed.

Riparian Ecosystem Reference Conditions

High elevation aerial photos taken in 1953 show a distinct contrast from the current condition. The photos represent the watershed condition and riparian ecosystem typical of the majority of the lands before Euro- Americans. The mixed ownership sections in the southeast half of the watershed were generally unentered and show dense forest stands of late-successional or old-growth forests except for a few sections on the eastern edge and southeast corner where logging operations had cleared large blocks of forest. Very few meadows or openings appear in this half of the watershed. Riparian vegetation is heavily influenced by high overstory, dense conifer forests with abundant coarse woody debris and regular contributions that create a diverse and dynamic vegetative community.

Generally, the northwestern portion of the watershed faces southeasterly with shallower soils and hotter, droughtier conditions. Exposed basalt bluffs dominate the view. The area northwest of the Rogue River is noticeable modified by human activity by 1953. This northwestern third of the watershed has a complex pattern of topographic relief with a variety of vegetative types. Farming and timber harvesting activities have altered the landscape and riparian areas. Lost Creek Dam had not been constructed and farmland dominates the reservoir lands. Agricultural patterns appear on the lower valley floor with possible old fire scars or timber harvesting shaping the lower slopes. Chaparral brush fields, open meadows and woodlots are intermixed on the lower slopes. The mid to upper slopes generally change from open forest stands to dense stands. Road construction and caterpillar timber harvesting has occurred throughout the northeast half by 1953.

Current Riparian Condition

Riparian stream surveys were conducted in Lost Creek WAU from October through November 1996 on approximately one-third of the watershed and completed in the summer of 1997. The survey objectives were to evaluate the current riparian condition, establish Riparian Reserve land

allocation, collect and compare baseline data for long term trend assessment, ground truth GIS hydrologic data, and utilize the information collected for watershed analysis and restoration projects.

Riparian surveys were completed on 389 stream reaches comprising approximately 75.1 miles of tributaries in Lost Creek watershed. A total of 123 miles (389 reaches) of perennial, intermittent, ephemeral streams, and dry draws were assessed. The data provides a descriptive snapshot of the current condition in the watershed. A total of 13.8 miles (81 reaches) were classified as "properly functioning". These reaches maintain most or all of the original biological and physical characteristics of the stream channel and vegetation. Human activities have had little to no influence on these stream reaches. By far the largest component of the Riparian Reserves, 54.9 miles totaling 272 reaches, is classified as "functioning at risk". These reaches have been moderately to heavily disturbed by human activities, but are generally stable and in the process of recovery. However, 12 reaches were identified with downward trend indicating a deteriorating condition. There are 5.1 miles (31 reaches) that are classified as "nonfunctioning". These reaches have multiple impacts which are severely affecting channel stability, water passage, water quality, or riparian vegetation. Six reaches were identified with a downward trend.

A summary list of positive and negative factors was created which described each reach. A complete list is included in Appendix 4, Riparian Ecosystem, page 22. The most common factors which are contributing to a deteriorating functioning condition are: lack of large woody debris or structure, lack of riparian buffer, incised channel, roads near channel, and high sediment.

Suggested Restorations Actions Summary

Buffer riparian zone	350 reaches
High slump potential	149 reaches
Add large Woody Debris	31 reaches
Road closure/Decommission/obliteration	23 reaches
Poor channel stability	21 reaches
Cattle Exclosure	14 reaches
Tree Planting	7 reaches

See Appendix 4, Riparian Ecosystem, page 22 for survey data.

There are approximately 2,917 acres of Riparian Reserve lands within Lost Creek Watershed. Approximately 687 acres, comprising 24%, of Riparian Reserve lands are equal to or less than 20 years old, and 1745 acres, comprising 60%, are 80 years or older according to current GIS data.

As a result of the riparian field surveys, a total of 2.7 miles of new stream miles within the watershed were discovered and added to the GIS data base. On the other hand, 48 miles of existing stream miles were classified as true ephemerals or dry draws and do not necessarily require protection as Riparian Reserves.

Range cattle are released on grazing allotments within the watershed in the spring. Generally, the cattle have unrestricted access to streams within the allotment. Vegetation in riparian areas attracts cattle later in the season as it tends to remain green and more palatable than in the uplands. Cattle can trample and graze forbs and grasses in the riparian area. No utilization or grazing studies have occurred within the watershed. Observations indicate relatively few riparian areas have been negatively impacted by cattle. However, there are some reaches that receive heavy use and the riparian area is degraded. A 4.3 mile cattle fence was constructed in 1995 along the western boundary of Lost Creek to reduce the impacts between cattle and recreational use along Lost Creek Lake, but also protected riparian habitat within the fenced area.

1981 Riparian Survey Results

Riparian stream surveys were conducted in 1981 on 60 miles of Class I (fish bearing streams) and Class II streams (intermittent and perennial streams without fish). All Class I streams were surveyed and approximately 5% of the Class II streams were sampled. The objectives of the survey were: (1) identify and classify riparian vegetative communities; (2) determine environmental parameters where each community may be found; (3) classify riparian zones according to habitat diversity, condition and trend; (4) identify causative factors which are detrimentally influencing the riparian zone.

Riparian condition was evaluated in 1981. The most significant management actions affecting the riparian zone were logging, roads and cattle grazing. Synergistic effects between two or more impacts were observed to be more damaging than one impact of equal intensity by itself.

Table 4 Riparian Condition 1981

	CLASS I MILES	PERCENT	CLASS II MILES	PERCENT
EXCELLENT	9.6	16.1	62.6	20.5
GOOD	35.2	59.1	156.3	51.2
FAIR	14.1	23.6	79.0	25.9
POOR	0.6	1.0	7.3	2.4
TOTAL	59.5	99.8	206.2	100

Streams surveyed included Vine Maple Creek, South Fork of Vine Maple Creek, Round Mt Creek, Beaver Dam Creek, Parsnip Creek, and Lost Creek. Sections surveyed were T. 34S., R.2E., Sec. 5 and T. 33S., R. 1E., Sec. 11, T. 33S., R. 3E. Sec. 32 and 31, and T. 34S., R. 3E. Sec. 5. The most common vegetative community reported was red alder, willow and vine maple under conifer overstory.

The 1981 riparian survey categorized habitat into 4 vegetative types with recorded number of miles:

CONIFER	8.1	MILES
HARDWOOD	40.0	MILES
SHRUB	10.1	MILES
GRASS/FORBS	2.3	MILES

Observations of note included comments describing biological observations such as fish presence, macroinvertibrates, and Pacific giant salamanders. Resource management activities with impacts that tended to degrade a stream and the riparian area included sedimentation from natural surfaced roads, ground based logging operations, heavy livestock grazing, slide areas aggravated by logging activities, and numerous logging slash debris jams with 3 to 4 foot drops. In some areas the debris jams create pools for resident fish and holes in the jams allowed fish passage.

Riparian Reserve Network

The Riparian Reserve land allocation established under the Aquatic Conservation Strategy (ACS) of the Northwest Forest Plan, ROD and the Medford District RMP is intended to protect the health of the riparian and aquatic ecosystems, and provide adequate habitat for a variety of late-successional species (see NWFP ROD, 1995, page B-9 to B-34). On a landscape scale, the network of Riparian Reserves on federal lands are intended to maintain and restore the productivity and resiliency of riparian and aquatic ecosystems.

The Riparian Reserve land allocation provides refugia for a wide variety of plant, vertebrate and invertebrate animal species. Riparian Reserves are intended to act as corridors of late-successional habitat and as transition zones which connect the uplands to the aquatic zone. This connectivity is particularly important for reptiles and amphibians during specific periods of their life-cycle. The Riparian Reserves act as a buffer in protecting riparian associated species from upland environmental extremes. The edge effect from forest openings, such as clear-cut plantations, affect micro-climate environmental conditions and the composition and structural characteristics of riparian vegetation. In addition, Riparian Reserves are designed to protect unstable areas, provide a conduit for coarse woody debris, and protect the hydrologic function of streams and the delivery of high quality water that supports the aquatic ecosystem.

The Riparian Reserve system acts as an important biological network across the landscape which is particularly important with fragmented ownership, such as Lost Creek Watershed. The amount of protection of the riparian and aquatic ecosystem on private lands is expected to be significantly less.

The BLM Riparian-Wetland Initiative for the 1990's was developed as a planning and management guide that recognized the importance of the riparian ecosystem. The goal of the initiative is to restore and maintain riparian-wetland areas so that 75% or more are in properly

functioning condition by the year 1997. The current objectives of the Aquatic Conservation Strategy guide the protection measures for the riparian and aquatic ecosystem over the long-term. However, it is unlikely that the main goal of the initiative can be met in forested eco-systems where "functioning at risk" stream reaches may take 20 to 50 years to provide adequate forest stand structure.

Riparian Reserve widths in Lost Creek Watershed should be maintained at the current standards to meet the Aquatic Conservation Strategy objectives based upon the following: (1) alternating land ownership patterns; (2) limited federal land ownership that occupies only approximately 33% of the watershed; (3) extensive timber harvesting over the past 40 years; (4) and generally steep and deeply incised streams especially along the lower elevations reaches. No specific Riparian Reserves have been identified for widening or narrowing. However in certain exceptional cases, boundary adjustments would be made along logical physical features.

The Riparian Reserve Delineation Module provides a procedure for permanently changing Riparian Reserves after evaluation of the site. An assessment is conducted of the site that includes physiological features and aquatic and riparian plant and animal species associated with late-successional stands . However, it is expected that very few situations would occur where boundaries would be adjusted.

AQUATIC ECOSYSTEM

General

The dominant water body feature in the WAU is Lost Creek Reservoir. Lost Creek Dam was built by the Army Corps of Engineers to provide for flood control and other social benefits in the Rogue River basin. The Lost Creek Reservoir has a total storage capacity of 465,000 acre-feet, is 10 miles long and covers 3426 acres at full pool (ODFW, 1994). Major streams within the WAU include the Middle Fork of the Rogue River, Beaver Dam Creek, Round Mountain Creek, Vine Maple Creek, Parsnip Creek and Cur Creek. Other notable streams are Lost Creek (North and South of the reservoir), Red Rock Canyon, and Hole-in-the-Ground Creek.

Water Quality

The Clean Water Act , as amended, directs federal agencies to comply with State water quality requirements to maintain and restore water quality necessary to protect identified beneficial uses (Medford District Proposed RMP, 1994, page 2-23). The State of Oregon has identified beneficial uses and applicable water quality criteria for the Rogue basin (OAR-340-41, 1995).

The two priority water quality parameters used in this analysis are water temperature and non-point source (NPS) sediment pollution. The present Oregon Department of Environmental Quality (ODEQ) standard for temperature in the Rogue Basin is that streams should not exceed 64° F based on a seven-day moving average of daily maximum temperatures. Specific exceptions to the standard are allowed. Oregon's NPS management plan requires the BLM to continue

coordination with ODEQ for implementation of Best Management Practices (BMPs) which are intended to protect the beneficial uses of water (Medford District Proposed RMP, 1994, Apdx. F, page 31-55). The current ODEQ standard for turbidity is that no more than a 10 percent cumulative increase in natural stream turbidities shall be allowed, as measured to a control point immediately upstream of the turbidity causing activity.

Stream Temperature and Aquatic Resources

The Federal Water Pollution Control Administration in 1967 called temperature "a catalyst, a depressant, an activator, a restrictor, a stimulator, a controller, a killer, one of the most important and most influential water quality characteristics to life in water" (U.S. EPA, 1986). Current EPA criterion for protection of freshwater aquatic resources as related to temperature is based on "the important sensitive species" present during the time of concern. This is based on two extreme upper temperature limits, with one based on a weekly maximum average temperature, which changes with season, reproductive stage, maintenance of species diversity, or prevention of nuisance growths of organisms, and the other being a short-term exposure (i.e., minutes) (U.S. EPA, 1986). The calculated values for maximum weekly average temperatures for growth and short-term maxima for survival of both juvenile and adult rainbow trout are 66° F and 75° F respectively (U.S. EPA 1986, Table 11). A summary of reported values for maximum weekly average temperature for spawning and short-term maxima for embryo survival during the spawning season for rainbow trout are 48° F and 55° F (U.S. EPA, 1986, Table 12.)

Water temperatures were collected at one site in the Lost Creek WAU during the summer months (June through September) of 1993, 1994, and 1995. Analysis of the temperature data used seven-day moving averages of daily maximum temperatures as the values for comparison with established Oregon Department of Environmental Quality (ODEQ) temperature criteria. This analysis revealed this site did not exceed ODEQ standards for temperature at any time from 1993-1995. Because of the limited number of temperature monitoring sites in this WAU, it is difficult to draw definitive conclusions about the distribution of temperature impaired reaches for other streams within the WAU. It is suspected that Beaver Dam Creek may be thermally limiting for salmonids in the lower reaches below Crane Creek, however temperature monitoring has not been completed to support this. Recent and historic stream surveys conducted on BLM administered lands reported stream temperatures which were generally in the good to excellent range for supporting salmonids.

Non-Point Source Sedimentation

Suspended fine sediment and deposition of fine sediment can acutely affect the survival of salmonids during: (1) intragravel incubation of eggs and embryos; (2) as fingerlings; and (3) as over-wintering juveniles (Chapman and MacLeod, 1987). Increased proportions of fine sediment in substrates has been associated with reduced intragravel survival of embryonic cutthroat trout (Irving and Bjornn, 1984) and steelhead trout (Tappel and Bjornn, 1983). Aquatic benthic macroinvertebrates can also be impacted in many of the same ways as fish which can result in a species shift in the benthic community. Impacts to fish which may result from this benthic

community shift are a reduction in the quality and quantity of food supply.

Turbidity

With the exceptions of the South and Middle Forks of the Rogue River, the flow regime in the Lost Creek WAU is largely dominated by rain, resulting in high flow periods during winter and low flow periods during summer. This consequently results in turbidity levels which are strongly linked to flow levels. One of the most commonly used measures of assessing the clarity or the optical qualities of water is the Jackson Turbidity Unit (JTU). As a general rule, prolonged periods of 50 JTU water alters fish behavior (USACE, 1980) and is considered a relatively high exposure level.

Although turbidity information is not available for streams within the Lost Creek WAU, turbidity data from Elk Creek , a major tributary below Lost Creek Dam, will be used to provide a general, estimated profile of seasonal variations in turbidity levels for the Lost Creek WAU. Average daily turbidity levels in Elk Creek from 1973-1978 ranged from 0-25 JTU's with seasonal variations in this range. In the summer average daily turbidity levels ranged from 0-10 JTU's, while average daily turbidity levels in the winter ranged from 0-25 JTU's. Hourly turbidity values in the winter can vary widely within a few hour period and turbidity levels have been recorded at $\geq$ 1000 JTU's (USACE, 1980).

Generally, adverse effects to fish and aquatic resources from turbidity in the Lost Creek WAU is not viewed as a major limiting factor for these species. There are certainly seasonal adverse conditions which exist in the watershed, however these are not felt to be of a magnitude or duration which have caused wide-spread damage to fish populations in the WAU. Due to the lack of information on background turbidity levels it is difficult to determine with any degree of certainty, if turbidity levels are currently having adverse effects on aquatic species.

Although turbidity is not currently viewed as a having a major adverse impact to fish populations in the watershed, efforts should be made to prevent anthropogenic inputs of sediment to the stream which would cause any unnecessary increases in turbidity levels. Streams of special concern would be those found draining the Medco and McNull soils series, and Beaver Dam Creek and its tributaries.

Stream Sediment Potential from Roads

The quantity of non-point source sediment delivered to streams as a result of land management activities is often difficult and time consuming to quantify. Although the amount of sediment being delivered to stream channels from federal lands is currently unknown, it is known that roads are generally the greatest contributors and have the greatest risk of delivering sediment to streams.

There are three major road types within this watershed. Bituminous surface type (BST) roads (paved or black topped roads) generally have the lowest risk of generating sediment from surface

erosion, and stream crossing failure. Rocked roads generally have a low to moderately high risk of generating sediment from surface erosion, and stream crossing failure. Natural surfaced (dirt) roads have a moderately high to high risk of generating sediment from surface erosion, and stream crossing failure. Of the 94.9 total miles of road in the Riparian Reserve for the WAU, 23.3 miles of road are located within federal Riparian Reserve lands. These would be priority areas of consideration for decommissioning, closure or upgrade, with priority being given to moderate to high sediment potential road segments.

Of the total road mileage located within the Riparian Reserve, 14.7 miles are located within high erosion potential[1] areas. These would be considered to have a very high potential for delivering sediment to streams and considered highest priority for decommissioning, closure, or upgrade.

Roads and Stream Channel Morphology

In addition to increasing stream sedimentation and blocking fish migration corridors, improper placement of roads can dramatically change the shape and function of a stream channel. Stream channel confinement from roads may result in simplification of aquatic habitats by increasing water velocity through channelization. Instream features like large wood and debris jams may become dislodged resulting in "down-cutting" of the stream which finally confines the stream to a single channel and cannot regularly access its floodplain.

One measure of the magnitude of channel confinement is the amount of roads which have been constructed within close proximity to streams. Of the approximate total of 460 miles of road constructed within the Lost Creek WAU, 95 miles (21%) have been constructed within close proximity to streams. Of this total, 23 miles (5%) are located on BLM land.

Some uninventoried roads are suspected to present channel confinement problems, but the extent or magnitude has not been determined. In addition, although not identified at this time, there could be locations where road encroachment from the abandoned road system is confining the stream channel as well.

Aquatic Mollusks

There have been no recorded surveys for aquatic mollusks in the Lost Creek WAU. Current information shows no known sites of sensitive species of aquatic mollusks within this watershed. The watershed, however, is within the range of the Highcap lanx (*Lanx alta*) a State of Oregon designated Species of Concern and the Fredenberg pebblesnail (*Fluminicola n.*sp 11), a ROD Survey and Manage aquatic mollusk.

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[1]These sites consist of steep to extremely steep slopes that have a high potential for debris type landslides. Gradients commonly range from 60 to 100+%. Classifications are based on geology, geomorphology, physiographic position, climate (especially precipitation), soil types, and other factors. Soils considered to be sensitive are the Medco, McNull, and McMullin series.

Fisheries Distribution

There are a variety of resident fish which occur within the Lost Creek WAU (see Appendix 5, Fish Species Occurring within Lost Creek WAU). Historically, anadromous salmonids utilized areas above Lost Creek Dam. However, upon completion of the dam this historic range was eliminated. Overall, there is limited information about the full distribution of native and introduced resident species which occur within this WAU. Native fish species such as cutthroat trout, rainbow trout, sculpin species, and Klamath smallscale suckers are present within the WAU. Rainbow trout have been found in Beaver Dam Creek and Lost Creek (north side of reservoir) and are the dominant salmonid in these reaches. Cutthroat trout are found primarily in small headwater tributaries where they are the dominant fish species. Although there is some overlap in the distribution of rainbow and cutthroat trout, there appears to be a relatively well defined zone where rainbow trout occurrence decreases and cutthroat trout occurrence increases. Overall, this represents approximately 36 miles of resident trout habitat, of which about 11.5 miles is on federal lands. Sculpin distribution is currently unknown. Klamath smallscale suckers have been documented only in Lost Creek Reservoir. (See map 14, Fish Distribution, page 101).

Eastern brook trout and brown trout are introduced species in the Rogue basin. The largest populations of brook trout are found in the North Fork of the Rogue River with smaller populations found in the headwater portions of the Middle and South Forks of the Rogue. Brown trout are found in the Upper Rogue River and occur in low numbers in the North Fork. Occasionally, brown trout are caught by anglers (<5/ year) in Lost Creek Reservoir near the confluence of the North Fork of the Rogue River (ODFW, 1993). Sampling efforts during the early 1980's produced no brook or brown trout in streams located within the WAU (ODFW, 1981).

Warmwater fish species which have been legally or illegally introduced into both Lost Creek Reservoir and Medco Pond are largemouth bass, smallmouth bass, black crappie, bluegill, and brown bullheads. Large mouth bass have been found below Medco Pond in Crane Creek.

Due to the relatively high number of exotic fish species within the WAU and upstream from the WAU, there is concern that negative impacts to native species could occur. Further sampling within the WAU should be completed to determine if introduced species have expanded their range and if negative interactions are occurring between introduced and native fish species.

Passage Barriers

The primary barriers for adult and juvenile fish in the WAU are culverts, Lost Creek Dam, and Medco Pond. Neither Lost Creek Dam nor Medco Pond provide for fish passage.

The seasonal effects to fish from the culvert structures range from delayed to complete obstruction of upstream migration for either adults or juveniles. Removal and/or modification of these structure to provide for complete undelayed and unobstructed migrations of all adult and juvenile fish species would be considered a priority for restoration of aquatic habitat connectivity.

In addition to human created barriers to fish migration, there are also barriers which occur naturally, such as beaver dams and falls. Although beaver dams may present seasonal barriers, they generally do not result in complete obstruction of fish passage throughout the year. Beaver dams also function as important, high quality habitat for rainbow and cutthroat trout during the winter and summer months. Surveys from 1980 (ODFW, 1981), 1981 (BLM unpublished surveys) and 1997 (BLM unpublished surveys) identified high abundance of fish in pools created by beaver dams. In addition to providing high quality habitat, beaver dams also maintain base water flows during the summer months.

While most falls above twelve feet in vertical distance are generally considered barriers to fish migration, they also act as isolation mechanisms for resident fish populations and other aquatic species. This prevents competition with species from below the falls and provides species above these barriers with greater access to available aquatic resources (e.g. habitat and food). With this isolation, and the advantages it may provide for aquatic species, some genetic variation may occur, given enough time. Both falls and beaver dams are naturally occurring barriers which play a role in overall watershed processes and should not be modified from their original form.

Hatcheries

The Coles Rivers and Butte Falls hatcheries are the primary fish propagation facilities in the Rogue basin. Coles Rivers hatchery began operation in 1975 and was built to mitigate for the loss of anadromous salmonid habitat above Lost Creek Dam. The ODFW has an active fish stocking program in both Lost Creek Reservoir and Medco Pond. Legal sized (>8") and fingerling rainbow trout are stocked during the spring months (April-June) to support and promote recreational angling on Lost Creek Reservoir and Medco Pond.

Hatchery released fish have been identified as contributing to the decline of anadromous salmonids through competition with wild fish, genetic introgression, residualism, disease, and creating a mixed stock fishery (FEMAT, 1993). Conversely, hatchery released fish also make up an important component of sport and commercial fisheries. Although hatcheries are an important variable affecting the health of wild salmonid production and recreational and commercial fisheries, an in-depth review of the positive and negative effects to fisheries and fishery resources from these hatcheries is not provided in this analysis.

Population Trends

No quantitative information is available relating to population trends for native fish species within the WAU. In 1980 Beaver Dam Creek and its tributaries were found to have either a moderate (12-30 fish / mi.) or low (<12 fish/ mile) abundance of native, resident trout species (ODFW, 1981). Current relative abundance of native, resident salmonid species is unknown. It is suspected that abundance may have declined or be declining due to habitat degradation resulting from land management activities.

Aquatic Habitat Status

Streams

The current condition of aquatic habitat throughout all fish-bearing stream reaches within the WAU is currently unknown. However, stream surveys limited to only stream reaches located on BLM administered land were conducted in the Lost Creek WAU by the BLM in 1981 and 1997. The surveys conducted during 1981 are relatively qualitative and only give a general condition assessment. The 1997 surveys utilized a semi-quantitative method to arrive at a general stream condition assessment. The use of these surveys in comparing and contrasting habitat conditions between survey years is limited to a few key attributes (pool quality, spawning gravel quality, riparian condition, large woody material, and temperature) and an overall stream functioning rating. Streams surveyed in 1981 and 1997 included portions of Beaver Dam Creek, Vine Maple Creek and tributaries, Parsnip Creek, Round Mountain Creek, and Lost Creek (North) (see Appendix 5, Stream Survey Data). All surveys were conducted during the summer months (June - August).

Table 5. Comparison of Key Habitat Elements (Interpreted from 1981 and 1997 Stream Surveys)

	Pool Quality		Spawning Gravel Quality		Riparian Condition		Large Woody Material		Temperature	
	1981	1997	1981	1997	1981	1997	1981	1997	1981	1997
Lost Cr. (North)	Fair	Fair	Good	Good	Good	Good	Good	Good	Good	Good
Beaver Dam Cr.	Good	Fair	Poor	Poor	Poor	Poor	Poor	Fair	Good	Good
Vine Maple Cr.	Fair	Good	Poor	Poor	Fair	Good	Good	Excl	Excl	Excl
S.F. Vine Maple Cr.	Good	Unk	Good	Unk	Good	Unk	Good	Unk	Excl	Unk
Round Mountain Cr.	Good	Good	Fair	Fair	Good	Good	Excl	Excl	Excl	Excl
Parsnip Cr.	Good	Fair	Poor	Poor	Fair	Fair	Fair	Fair	Good	Good

Note: Excl = Excellent
Unk = Unknown

Table 6. Lost Creek WAU Stream Condition Rating

	Overall Condition Rating	
	1981	1997
Lost Cr. (North)	Good	Good
Beaver Dam Cr.	Fair	Fair
Vine Maple Cr.	Fair	Good
S.F. Vine Maple Cr.	Good	Unknown
Round Mountain Cr.	Good	Good
Parsnip Cr.	Good	Fair

In general, habitat features found to be in an impaired condition were quality and quantity of spawning habitat, amount of the riparian area in an early successional condition, and pool quality (Table 5.). The major identified causes for degradation of aquatic habitat were logging, roads and railroad grades, and cattle grazing. Although the majority of surveyed stream segments within the WAU are considered in good condition, two of the largest streams, Beaver Dam Creek and Parsnip Creek are in fair condition (Table 6.). Additionally, most streams in the WAU are in an "At Risk" functional condition primarily due to high sedimentation and riparian vegetation impacts (Table 7.). Priority actions to restore streams within the WAU would be road decommissioning, culvert replacement to provide for fish and amphibian passage, protection of known beaver locations, and protection and active management of riparian areas to create late-successional forest conditions.

Table 7. Functional Rating for Streams Within the Lost Creek WAU

	Overall Functional Rating	
	1981	1997
Lost Cr. (North)	Properly Functioning	Properly Functioning
Beaver Dam Cr.	Functioning At Risk	Functioning At Risk
Vine Maple Creek	Functioning At Risk	Unknown
S.F. Vine Maple Cr.	Functioning At Risk	Functioning At Risk
Round Mountain Cr.	Functioning At Risk	Functioning At Risk
Parsnip Cr.	Functioning At Risk	Functioning At Risk

Reservoirs and Ponds

The dominant standing water body features in the WAU are Lost Creek Reservoir and Medco Pond. Both Lost Creek Reservoir and Medco Pond support a variety of coldwater and warmwater gamefish species which provide anglers opportunities for consumptive recreational use.

Habitat in Lost Creek Reservoir is deficient due to a lack of woody cover. Plant species which are tolerant to flooding and reservoir drawdown, such as willows, would provide cover, nutrient input and erosion control (ODFW, 1994). To provide juvenile rearing habitat and cover for adults, submerged woody structure such as manzanita brush or conifer root wads and small conifer bundles could be used. These could be placed from full pool to below minimum conservation pool level. Similar enhancement techniques could be used for Medco Pond. However, these enhancement techniques could conflict with Army Corps human safety and dam operation objectives for Lost Creek Reservoir.

Aquatic Habitat Reference Conditions

Reference conditions in the Lost Creek WAU existed prior to Euro-American settlement. It could be speculated that habitat conditions were dramatically different than they are today. Pre-historic streams in the southern portion of the WAU (tributaries south of Lost Creek Reservoir) would be expected to have greater numbers of pieces and total volume of wood in the streams,

clean gravels for spawning substrate, greater pool complexity, a riparian area composed of multiple beaver meadows, and a predominantly late-successional forest. The high fire frequency in the northern portion of the watershed would be expected to have maintained oak meadows with scattered conifers adjacent to streams. The lower portions of frontal streams to the Rogue River which are now inundated by Lost Creek Reservoir would have been expected to be the most productive portions for salmonids.

Aquatic Habitat Trend

It appears from the available data that the majority of aquatic habitat within the WAU has maintained or improved in condition on surveyed reaches over the past fifteen years. Noticeable improvement has occurred on Vine Maple Creek in the categories of pool quality, riparian condition, and large wood abundance. However, in Parsnip Creek a noticeable decline in pool quality was observed. Reasons for this decline are unknown. Overall, it would be expected that trends on all streams throughout the WAU should improve over the long term, through road decommissioning, greater riparian protection, and maintaining or actively managing to attain late-successional characteristics in riparian areas on federally administered lands. It is uncertain, however, when these benefits will be detectable at the watershed scale though available data suggests a positive overall trend.

Critical Watersheds

All streams within the WAU are not equal with respect to aquatic habitat features. Maintenance or improvement of watersheds which have the best remaining aquatic habitat is one means by which to help assure the long-term stability of fish populations within a larger geographic area. Due to the relatively good quality habitat, high number of beaver ponds, and the relative uniqueness of these features within the WAU, the Beaver Dam Creek watershed is considered a critical watershed within the Lost Creek WAU. Additionally, Lost Creek (North) is considered a critical watershed based on high quality habitat. General management guidelines would be the same for all watersheds within the WAU. However, restoration measures should be considered a higher priority in the Beaver Dam Creek and Lost Creek (North) watersheds.

CHAPTER 4
RECOMMENDATIONS

HUMAN/SOCIAL ASPECT

Recreation

Concern:

The increased recreational potential in the watershed could bring about the development of facilities to meet those growing needs. These facilities could stimulate the economies of the local communities but in turn could cause impacts to the environment and cause potential user conflicts.

Assumptions:

1. Continued population growth in the region will bring increased recreational use within the watershed.
2. Significant increase in the retired population in the Rogue Valley will look for recreational opportunities in close proximity to their place of residence.
3. Development of the Spirit of the Rogue Nature Center will increase the potential to make the watershed a year round destination recreation area.

Suggested Actions

1. Maintain opportunities for dispersed recreation throughout the watershed primarily to accommodate hunting.
2. Work with the Spirit of the Rogue Nature Center Planning Committee to speculate projected recreational increases in the region, as result of the construction of the Nature Center.
3. Improve hiking trail and overlook at Flounce Rock and Baker Cypress ACEC to provide diversified recreation in the watershed. In addition work with local landowners in the redevelopment of existing auto tour to Flounce Rock.
4. Promote opportunities for partnerships in the development of recreational sites within the watershed.
5. Complete Special Recreation Management Area Plan to further understand recreational potential in proposed Special Recreation Management Area (SRMA) within the watershed.

Visual Resource Management (VRM)

Concern:

Previous harvest methods on public and private industrial lands do not always meet the VRM objectives established in the Medford District RMP. Casual observations from the public may speculate that all these harvest methods are occurring on public lands and may see them as a negative impact on the natural landscape.

Assumptions:

1. Most economically legal harvest methods will continue on private industrial forest lands continuing potential negative effects to the visual landscape.
2. Significant forest breaks in the canopy layer will occur between some private and public lands creating unnatural forest canopy layers.
3. Maintaining natural landscape of continuous forest canopy layer that meets the objectives of VRM classifications stipulated in the Medford District RMP will require the cooperation of all land owners.

Suggested Actions
1. Maintain VRM classification of II on public lands within the view of Lost Creek Reservoir and State Highway 62.
2. Try to maintain a VRM classification of III in other parts of the watershed not in view previously mentioned.
3. Where VRM II classifications apply attempt to blend canopy layers so that the form and line of the landscape more resembles the historic landscape.

TERRESTRIAL ECOSYSTEM

Forest Stands

Concern: Simplification of forest structure and pattern has reduced biological diversity, connectivity, and landscape function. Ecological processes inherent to the landscape have been altered to levels different than the historic range of natural variability. The kind, amount, and spatial distribution of plants, animals, and other forest organisms across the landscape may affect long-term landscape health and sustainability.

Assumptions:
1. Intensive harvest practices on private industrial lands will likely continue to shift any remaining older stands towards earlier successional conditions. The amount of late-successional forests on private lands is expected to decrease from existing levels.
2. Older, structurally diverse stands within this watershed will predominantly occur on federally managed lands.
3. Ownership patterns and differing management objectives, past and present, has and will continue to dictate landscape pattern and condition.
4. Maintaining landscape processes and functions will require the participation of all land owners.

Suggested Actions:
1. Maintain a diversity of age/size classes throughout the landscape. Utilize historic range of natural variability to determine target acres. The level of late-successional stands within this watershed should trend towards 45%. Late-successional stands should be defined by structural and species composition rather than by age.
2. Retention or development of multilayer, late-successional stands should be targeted for north facing slopes, whereas on south facing slopes late-successional stands should be more single-

layered. These types of stand structures would be similar to the structural characteristics that natural fires would have created. Map 17, Matrix Lands Available for Stand Treatment, page 104, shows the approximate location of existing stands >11"dbh, based upon aspect. Some of these stands may currently have the desired late-successional characteristics or may be candidates for the development of those characteristics.

3. Management activities should be focused towards pre-commercial and commercial thinning, uneven aged regeneration harvests, and salvage opportunities. Commercial thinning opportunities should be targeted at dense conifer stands that are less than 150 years old with relative densities greater than 50%. Map 18, Thinning Opportunities, page 105, shows potential commercial thinning areas. The areas shown include all matrix lands except those lands in deferred watersheds (harvest activities are limited within deferred watersheds until January 2003).

4. In the short term, on BLM managed lands, even-aged regeneration harvesting that creates early-successional stands should be limited to insect infested stands, disease infested stands, fire damaged stands, and stands which are deteriorating to the point where the integrity of the stand is threatened. On harvested areas, maintain long-term site productivity and biological legacies by retaining coarse woody debris, snags, and green trees.

5. Promote and improve species diversity by encouraging natural levels of diversity found in native plant communities. Utilize plant association principles to describe and define desired levels of species diversity.

6. Improve horizontal and vertical diversity in even-aged plantations, create canopy gaps, encourage species diversity, and maintain unthinned clumps. Thin to differing residual densities dependent upon site class and conifer species targeted. On north aspect sites, target stands towards a multilayered structure using variable density and leaving small unentered clumps (<.25 acres) and create small (.1 acre) canopy gaps. Southerly aspects should trend towards single layer stands. Both stand structures would be similar to conditions within a fire influenced ecosystem. Map 17, Matrix Lands Availible for Stand Treatment, page 104, identifies young stands 0-11" dbh by aspect.

7. Reduce detrimental impacts to important invertebrates, fungi, mosses, and lichens by minimizing litter and topsoil disturbance during management activities.

8. Maintain pine species (ponderosa and sugar pine) as a seral stand component. Create openings large enough for natural pine regeneration when a healthy pine overstory is present. Utilize elevation <3500', stocking level of 60-100%, and aspect to identify priority areas (see map 19, Priority Areas for Retaining Large Ponderosa Pine and Sugar Pine, page 106). Elevation and stocking level combined with aspect help to determine the probability of loss of pine species. Pine species in stands on southerly aspects at <3500' and stocking levels >60% are at the highest risk followed by pine species in stands on north aspects at <3500' and stocking level >60%.

9. Provide environmental conditions that are beneficial for insect predators (salamanders, bats, birds, etc.) by leaving woody debris, down logs, and snags for habitat.

10. Reduce existing populations of noxious weeds and prohibit expansion of weed populations from surrounding watersheds by use of native species of grasses, forbs, and shrubs whenever possible.

11. Stabilize soil by reducing compaction and erosion; use logging systems that minimize impacts

during harvest activities.
12. On oak/pine woodland sites, re-introduce periodic fire to maintain lower vegetative densities, maintain oak as a viable stand component, and increase wildlife forage values.

Rationale:
Improving forest ecosystem health, diversity, and resiliency increases stand resistance and tolerance of climatic extremes/fluctuations, reduces potential for major insect and disease outbreaks, reduces potential for large fires, reduces erosion, and increases soil productivity.

Measurement/Monitoring:
Measurement of relative densities of managed stands are 35 to 50 percent (stand vigor and growth are maximized). Populations of plant and animal species associated with late-successional forests are well distributed. On BLM managed lands, harvesting activities have maintained structural/species diversity and late-successional characteristics.

Success:
The type, amount, and distribution of seral stages within landscape are trending towards the desired range. Increased stand vigor and growth rates, endemic levels of insect and disease, and viable populations of a variety of plants and animals.

Spotted Owl Connectivity
Concern:
Currently, connectivity between the two LSRs will be reduced.

Assumptions: That 100 acre owl cores connectivity blocks and Riparian Reserves would not provide adequate connectivity between LSRs, and that additional measures are justified in designated Spotted Owl Central Habitat Unit.

Suggested Actions:
1. Maintain additional suitable habitat adjacent to selected existing owl cores (Taggarts Creek, Smith Creek, Blue Goose, and Old Lost One). Consideration should be given to deferred entry or light-touch thinning to accomplish the goal.
2. To supplement the owl core "stepping stones," maintain additional patches (40 to 80 acres each) of forest stands in long-term rotation and light-touch entry to provide older stand structure connectivity along a two mile wide corridor between the LSRs.

Rationale:
Slow the degradation of the quality of habitat within the corridor for spotted owls and other older seral stage dependent species.

Measurements/Monitoring:
Additional suitable habitat is maintained within the corridor.

Success:
Habitat is sufficient so that the owls continue to breed in the selected sites within the corridor.

Jackson Travel Management Plan
Concern:
Degradation of big-game winter range due to density of open roads.

Assumptions:
Closure of roads will reduce disturbance to big-game as well as ameliorate other problems such as poaching, trash dumping, soil erosion from unsurfaced roads, and firewood theft.

Suggested Actions:
1. Continue BLM support of the cooperative road mange plan (JACTMA).
2. Reduce open road density by blocking and/or decommissioning.

Measurements/Monitoring:
Open road density is reduced from current level.

Success:
There is a reduction in poaching, trash dumping, and erosion.

Special Status Plants:
Concern:
Federal land management activities should not jeopardize the survival of Special Status Plant species. Among other Special Status Plants found in the watershed, Baker Cypress are the most unique to Lost Creek Watershed, and are of interest by the BLM, the state of Oregon, and scientists nationally. Survey and Manage species have a high probability of occuring in the watershed.

Assumptions:
1. Land management projects would be located at times in the proximity to where Sensitive Status Plant populations occur.
2. "Watch" and "Tracking" species are of local concern and merit the lowest level of management and protection.

Suggested Actions:
1. Manage and protect known populations and habitat of all Federal Candidate Species, Bureau Sensitive Species and Survey and Manage Species (1 and 2).
    a. Evaluate sensitive plant sites.
    b. Establish protection measures which ensure species survival and habitat protection.
    c. Consider conservative pro-active management actions.

d. Collect and conserve seed of Special Status Plant Species.

2. Field survey potential habitat.
   a. Complete sensitive plant surveys on all unique habitats during project planning stage.
3. Monitor Baker Cypress frequently. Monitor other sensitive species every 3 to 5 years.
4. Develop conservation strategy for Baker Cypress grove.
5. Search for Survey and Manage lichens, bryophytes, and fungi species in the watershed.

Rationale
The Baker Cypress grove is declining in health. A conservation strategy is needed to determine options for management of the Baker Cypress. A more intensive level of monitoring is required.

Measurement/Monitoring:
1. Monitor Baker Cypress groves yearly. Data to monitor: new germinants, stand health, grazing/browsing. Establish photo points.

Success:
Completion of Survey and Management species with highly qualified botanist.
Baker Cypress grove health is maintained or improves. Natural regeneration occurs and survives.

Wildfire and Fuel Mangement
Concern:
Portions of this watershed are susceptible to moderate to large high intensity wildfires. Fire exclusion has allowed higher to much higher than normal natural fuel loadings.

Assumptions:
Large fire potential will continue to increase until fuels are reduced either by wildfire or some level of fuels treatment occurs.
Human caused ignitions will gain in significance as recreation and rural settlement increases.

Suggested Actions:
In those portions of the watershed that fall into the IRA zone, opportunities for fuels treatments such as modified fuels profile zones exist. Underburning in brush fields and white oak stands will modify fuel profiles. The object of these treatments would be to reduce large fire size.
Priority should be given in the following order:
1. South aspects adjacent to rural development.
2. South aspects near ridgetops or other topographical breaks at 3500 ft. or less in elevation.
3. Brush field/white oak stand conversions.
4. Any combination of above occurring on north aspects.

Rationale:
Currently, the portion of the watershed within the IRA zone is characterized by fuel loadings outside historical ranges. When fires occur in this zone they will burn with greater intensities than

the historical range. Fires occurring at anticipated intensities are not compatible with management goals and have the potential to cause unacceptable environmental damage. The recommended treatments will bring fuel loadings closer to historical ranges, thereby lessening fire intensities.

Measurement/Monitoring:
There will be a corresponding shift in fuel models from vegetation manipulation. There will be a reduction in ladder fuels. Vegetation densities will show a reduction. Modified fuel zones will break fuel continuity across the landscape.

Success:
Change in fuel models and corresponding fire behavior. Modified fuel zones which are located by topographic breaks may lessen fire size.

Cumulative Effects
Transient Snow Zone:
Concern:
Reduce the potential of a rain-on-snow event by maintaining or improving the canopy closure of stands and minimize or reduce the amount of forest openings in the transient snow zone (3400-4500 ft.).

Suggested Action:
1. Maintain 40% canopy closure as indicated by the Best Management Practices for southern General Forest Management Area (GFMA) stand treatment for future harvest units in the transient snow zone elevation, except where the stand conditions warrant northern GFMA treatment. Small openings of 2-4 acres would be preferred in regeneration treatments where canopy closure is greater than 80%.
2. Where conditions warrant, an increase to 60% canopy cover may be appropriate; this would be determined on a drainage by drainage and unit by unit assessment.
3. Where existing canopy closure is greater than 80% and stand treatment necessitates regeneration harvesting within high risk sub-watersheds, soil disturbance should be kept to a minimum to reduce the cumulative effect of creating openings and soil disturbance.

Rationale:
Openings where the overstory has been removed or there is inadequate canopy to intercept a deep accumulation of snow are areas at risk of contributing to peak flows during a rain on snow event.

Measurement/Monitoring:
Utilize remote sensing and aerial photographs to track the location and size of openings in the transient snow zone. The desired future condition for openings within the TSZ is less than 30%.

Success:
Maintain adequate stands of vegetation to intercept and prevent deep accumulation of snow.

Slope Stability
Concern:
Reduce The Risk of Landslides

Suggested Action:
1. Stabilize unstable road prisms with buttressing and/or revegetation.
2. Limit regeneration harvests in areas of known landslide deposits.
3. Upgrade road drainage to meet 100 year flood standards through proper culvert sizing and spacing to reduce the impacts of flooding.
4. Provide adequate drainage through proper maintenance of existing roads.

Rationale:
Land slides due to slope instability from road construction and timber harvest can produce large amounts of sediment delivery to stream channels. The landslide and debris flow deposits are areas of potential instability. Management activities in the area should be planned to limit ground disturbance to avoid triggering subsequent landslides or debris flows.

Measurement/Monitoring:
Utilize aerial photography and geologic field methods to monitor existing landslide deposits or areas of potential instability.

Success:
Reduced sedimentation to streams. No reactivation of existing landslide deposits. No newly created slumps or landslides.

Soil Compaction
Concern:
Reduce the amount of compacted acres in the watershed.

Suggested Action:
1. Rip, decommission, or obliterate roads where possible exercising care to achieve proper soil moisture in Medco soils.
2. Minimize future road construction. Consider alternative logging methods (i.e., helicopter). There should be no net gain in road densities over the long term (>10 years).

Rational:
Compaction due to past tractor logging prevents infiltration, increases runoff, inhibits root growth, and reduces site productivity.

Measurment/Monitoring:
Conduct soil testing for compaction in areas where compaction is suspected. Test areas where

ripping has occur to determine if amelioration has been accomplished.

Measurement of Success:
Net loss in compacted area.

RIPARIAN ECOSYSTEM

Concern:
The riparian ecosystem is an important component of the landscape. The Functioning Condition of streams and Riparian Reserve lands need to be monitored and evaluated periodically to determine the condition and trend of each individual reach and of the watershed as a unit.

Assumptions:
1. Aquatic Conservation Strategy objectives would be followed on federal lands.
2. Private timber lands would continue to be harvested frequently and generally follow state forestry practices which includes significantly less protection of the riparian ecosystem.

Suggested Action:

All Riparian Reserves

1. Assure management actions do not adversely impact riparian areas through adequate field evaluation.
2. Till compacted soils and revegetate old spur roads, unneeded roads, and landings within the Riparian Reserve.
3. Consider controlled fire underburn for long-term ecologic stability. Apply where appropriate.
4. Revegetate road cut banks and other disturbed area to reduce soil erosion, surface water channeling, increase organic material, and increase surface water percolation rates.
5. Maintain drainage on existing roads, especially natural surface roads.
6. Utilize native vegetation for restoration and revegetation activities.

Functioning at Risk Streams

1. Import woody debris to achieve a range of 80 to 180 pieces of all size material with particular emphasis on coarse woody debris which will enhance stream complexity on reaches identified as deficient to improve the functioning condition and meet biological and physical objectives.
2. Implement riparian silviculture projects to promote increased growth rates of conifer trees. Revegetate openings.
3. Protect resident beaver populations.
4. Monitor free roaming cattle. Exclude cattle when riparian areas are degraded.
5. Restore riparian vegetation where degradation has occurred. Examples include sluice-outs, ponderosa pine plantations and other areas not representative of the original forest community.

Management of Ephemeral Draws

(North side of Lost Creek Lake and along the south shore, and Lost Creek Gorge)

1. Increase protection buffers near ephemeral draws where steep topography and unstable soils occur to reduce potential slumping, erosion, and sedimentation.
2. Reduce roads, skid trails, and compacted soil in the vicinity.
3. Increase protection measures that maintain natural hydrological flow patterns in the zone.

Rationale:
The ephemeral draws in this zone are prone to sluice-outs and debris torrents due to unstable soils and headwall topographic features. Many have been highly disturbed and contribute to downstream degradation during winter storms. This zone requires higher standards of protection to meet the ACS objectives.

Measurement/Monitoring
Riparian Reserve surveys should be repeated every 5 to 10 years to determine changes in baseline functioning condition, the effects of restoration activities, and change in riparian trend.

Success:
There is a measurable reduction in miles of roads. Landings are tilled and revegetated (miles/acres). Coarse woody debris amounts have increased. Growth rates of young plantations is high.

AQUATIC ECOSYSTEM

1. Concern:
Management actions have altered the timing, magnitude and duration of physical processes that affect aquatic habitat within the watershed. In some areas this has resulted in simplified aquatic habitat conditions. This may affect the long-term viability and sustainability of aquatic and riparian dependent species within the WAU, though actual effects are not known.

Assumptions:
1. Implementation of Aquatic Conservation Strategy Objectives is likely to result in restoring the character of physical processes within the WAU.
2. Implementing all facets of the Aquatic Conservation Strategy is likely to maintain viable populations of native plant, invertebrate and vertebrate aquatic and riparian dependent species to provide for intrinsic resource and social values.

Suggested Actions:
A. Maintain and restore unobstructed migration corridors for amphibian and resident fish species by:

1) Eliminating or modifying culverts and other human created instream barriers to accommodate passage needs for multiple life-history stages and species under a variety of stream flow conditions.

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

1) Protecting streams with appropriate riparian reserve widths.
2) Reviewing and modifying, if necessary, grazing allotment management plans, and establishing or maintaining livestock exclosures around streams and springs.
3) Protecting and re-establishing beaver populations.
4) Using appropriate silvicultural prescriptions in early and mid-successional stands within the riparian reserve to attain late-successional conditions at a rate greater than what may currently be biologically possible .
5) Re-establishing native vegetation through planting.
6) Inventory aquatic habitat to evaluate current aquatic habitat conditions.

C. Maintain and restore water quality, quantity and functions (capture, storage and release) to support the biological, physical, and chemical integrity of the aquatic ecosystem by:

1) Protecting streams and springs with appropriate riparian reserve widths.
2) Establishing or maintaining livestock exclosures around streams and springs.
3) Minimizing and recovering openings in the transient snow zone.
4) Obliterating,, decommissioning, upgrading, and maintaining roads to reducing non-point source sedimentation from roads by implementing established TMO's.
5) Minimizing or eliminating new road construction
6) Protecting and re-establishing beaver populations

D. Maintain and restore natural watershed and stream channel stability by allowing streams to develop a stable dimension, pattern, and profile from regular floodplain inundation, and woody debris recruitment and routing by:

1) Obliterating, decommissioning, upgrading, and maintaining roads in accordance with established TMO's.
2) Design and re-design stream crossings capable of passing large wood and other debris resulting from debris slides.
3) Implementing stream restoration projects which utilize large wood, boulders, and other physical structures to restore areas identified as impaired.
4) Protecting streams with appropriate riparian reserve widths.
5) Minimizing or eliminating new road construction.
6) Using appropriate silvicultural prescriptions in early and mid-successional stands within the Riparian Reserve to attain late-successional conditions at a rate greater than what may currently be biologically possible .

E. Maintain and restore the physical integrity of the aquatic ecosystem including streambanks and bottom configurations by:

1) Protecting streams and springs with appropriate riparian reserve widths.
2) Protecting and re-establishing beaver populations.
3) Protecting streamside areas with livestock exclosures.

4) Implementing stream restoration projects which utilize large wood, boulders, and other physical structures to restore areas identified as impaired.

F. Maintain and restore the sediment regime under which the aquatic ecosystem evolved by:

1) Obliterating, decommissioning, upgrading, and maintaining roads in accordance with established TMO's.
2) Minimizing or eliminating new road construction.

G. Maintain and restore native resident fish populations by:
1) Evaluating the current distribution of exotic fish species.
2) Preventing any further introduction of exotic salmonids into native salmonid streams from stocking or escapement from reservoirs.
3) Evaluating the current level of competition between exotic and native resident salmonids.

Rationale:
Meeting Aquatic Conservation Strategy Objectives will improve the viability and sustainability of vertebrate and invertebrate aquatic and riparian dependent species within the WAU.

Measurement/Monitoring:
Measuring changes to aquatic habitat and habitat connectivity using aquatic inventories and fish passage criteria. Measuring the change in abundance of native aquatic species using population estimate and biomonitoring methodologies.

Success:
Improved quality, abundance, and distribution of aquatic habitat and native aquatic species.

Concern:
The reservoir sport fishery within the Lost Creek WAU is not being utilized to its full potential.

Assumptions:
Improving sport fishing opportunities and access will improve utilization of the reservoir sport fishery within the WAU.

Suggested Actions:
Maintain and promote a reservoir sport fishery by:
1) Improving nearshore habitat in Lost Creek Reservoir and Medco Pond with cover structures such as logs, brush bundles, or boulders.
2) Planting vegetation which is capable of withstanding fluctuating water levels from water impoundment and reservoir drawdown in nearshore areas of Lost Creek Reservoir.
3) Developing and improving fishing access for physically capable and challenged persons.

4) Developing promotional material and sponsoring fishing tournaments.

Rationale:
Improving utilization of the reservoir sport fishery will improve economic benefits to local communities.

Measurement/Monitoring:
In conjunction with ODFW, monitor utilization rates using ODFW's creel survey and bass study methodology. Actual implementation is extremely low in priority for fisheries monitoring in the Rogue Basin and would need to be developed further at a later date.

Success:
Improved utilization levels of the reservoir sport fishery.

FIGURES

ACRONYMS

ACEC	Area of Critical Environmental Concern
ACOE	Army Corps of Engineers
ACS	Aquatic Conservation Strategy
AUM	Animal Unit Month
BLM	Bureau of Land Management
BMP	Best Management Practices
CHU	Critical Habitat Unit
CWD	Coarse Woody Debris
EA	Environmental Assessment
EEA	Environmental Education Area
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency
FEIS	Final Environmental Impact Statement
FEMAT	Forest Ecosystem Management Assessment Team Report
FLPMA	Federal Land Policy and Management Act
GFMA	General Forest Management Area
GIS	Geographic Information System
IRA	Incident Risk Assessment
JACTMA	Jackson Access Cooperation Travel Management Plan
LSR	Late-Successional Reserve
NEPA	National Environmental Policy Act
NSO	Northern Spotted Owl
O&C	Oregon & California
ODF	Oregon Department of Forestry
ODFW	Oregon Department of Fish and Wildlife
OHV	Off-Highway Vehicle
ODEQ	Oregon Department of Environmental Quality
OWRD	Oregon Water Resources Department
PD	Public Domain
RA	Resource Area
RAMP	Recreation Area Management Plan
RMP	Resource Management Plan
ROD	Record of Decision
SOTRNC	Spirit of the Rogue Nature Center
SRMA	Special Recreation Management Area
T&E	Threatened and Endangered (species)
TSZ	Transient Snow Zone
URRTA	Upper Rogue Regional Tourism Alliance
USDA	United States Department of Agriculture

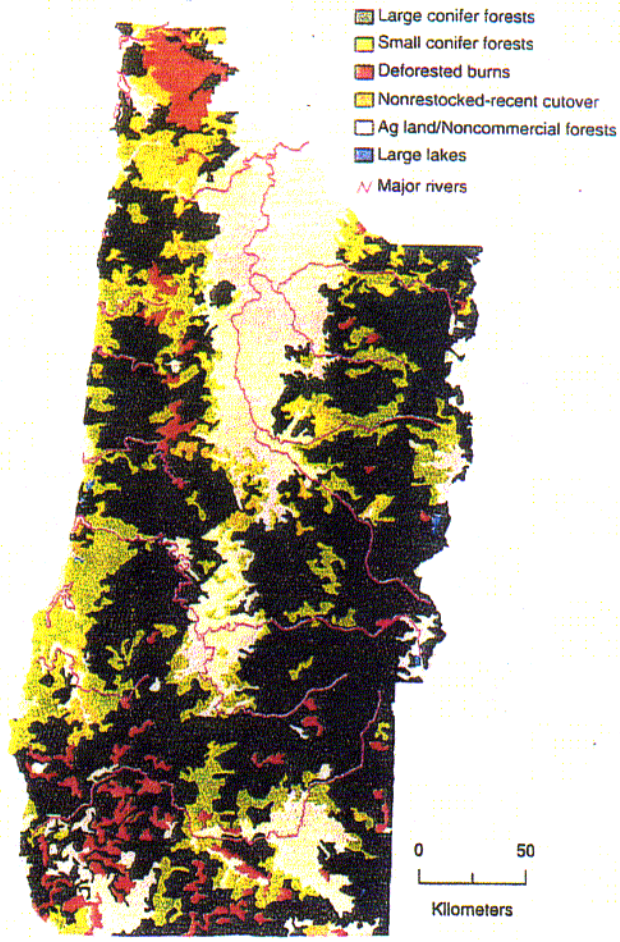

Figure 1. 1933 forest patterns of western Oregon. The Rogue Valley and the Lost Creek watershed are in the lower southeastern corner of the map.

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FIGURE 1

USDI	United States Department of the Interior
USF&WS	United States Fish and Wildlife Service
VRM	Visual Resource Management

GLOSSARY OF TERMS

Analytical Watershed - For planning purposes, a drainage basin subdivision of the planning area used for analyzing cumulative impacts on resources.

Anadromous Fish - Fish that migrate as adults from the ocean into fresh water streams to reproduce young that return to the ocean to grow to maturity.

Animal Unit Month (AUM) - The amount of forage necessary for the sustenance of one cow or its equivalent for one month.

Aquatic Ecosystem - Any body of water, such as a stream, lake or estuary, and all organisms and nonliving components within it, functioning as a natural system.

Archaeological Site - A geographic locale that contains the material remains of prehistoric and/or historic human activity.

Area of Critical Environmental Concern (ACEC) - An area of BLM-administered lands where special management attention is needed to protect and prevent irreparable damage to important historic,, cultural, or scenic values, fish and wildlife resources or other natural systems or processes; or to protect life and provide safety from natural hazards.

Back Country Byway - A road segment designated as part of the National Scenic Byway System.

Best Management Practices (BMP) - Methods, measures, or practices designed to prevent or reduce water pollution. Usually, Best Management Practices are applied as a system of practices rather than a single practice.

Big Game - Large mammals that are hunted, such as Roosevelt elk, black-tailed deer, and black bear.

Biological Diversity - The variety of life and its processes.

Biological Legacies - Components of the forest stand (e.g., large trees, down logs, and snags) reserved from harvest to maintain site productivity and to provide structure and ecological functions in subsequent forest stands.

Broadcast Burning - A controlled fire that burns within defined boundaries to achieve management objectives.

Bureau Assessment Species - Plant and animal species on List 2 of the Oregon Natural Heritage Data Base, or those species on the Oregon List of Sensitive Wildlife Species (OAR 635-100-040), which are identified in BLM Instruction Memo No. OR-91-57, and are not included as federal candidate, state listed, or Bureau-sensitive species.

Bureau-Sensitive Species - Plant or animal species eligible for federal listed, federal candidate, state listed, or state candidate (plant) status, or on List 1 in the Oregon Natural Heritage Data Base, or approved for this category by the State Director.

Candidate Species - Those plants and animals included in Federal Register "Notices of Review" that are being considered by the Fish and Wildlife Service (FWS) for listing as threatened or endangered. There are two categories that are of primary concern to BLM. These are:

> Category 1. Taxa for which the FWS has substantial information on hand to support proposing the species for listing as threatened or endangered. Listing proposals are either being prepared or have been delayed by higher priority listing work.
>
> Category 2. Taxa for which the FWS has information to indicate that listing is possibly appropriate. Additional information is being collected.

Canopy - The more or less continuous cover of branches and foliage formed collectively by adjacent trees and other woody species in a forest stand. Where significant height differences occur between trees within a stand, formation of a multiple canopy (multi-layered) condition can result.

Coarse Woody Debris - Portion of tree that has fallen or been cut and left in the woods. Usually refers to places at least 20 inches in diameter.

Commercial Forest Land - Land declared suitable for producing timber crops and not withdrawn from timber production for other reasons.

Commodity Resources - Goods or products of economic use or value.

Concern - A topic of management or public interest that is not well enough defined to become a planning issue, or does not involve controversy or dispute over resource management activities or land use allocations or lend itself to designating land use alternatives. A concern may be addressed in analysis, background documents, or procedures or in a noncontroversial decision.

Connectivity - Habitat that provides components of older forest characteristics for spotted owl dispersal and other species' natural habitats.

Consistency - Under the Federal Land Policy and Management Act, the adherence of BLM

resource management plans to the terms, conditions, and decisions of officially approved and adopted resource related plans, or in their absence, with policies and programs of other federal agencies, state and local governments and Indian tribes, so long as the plans are also consistent with the purposes, policies, and programs of federal laws and regulations applicable to BLM-administered lands. Under the Coastal Zone Management Act, the adherence to approved state management programs to the maximum extent practicable, of federal agency activities affecting the defined coastal zone.

Core Area - That area of habitat essential in the breeding, nesting, and rearing of young up to the point of dispersal of the young.

Corridors - Provides routes between similar seral stages or vegetative types, corridors may include roads, riparian areas, powerlines, timber.

Cover - Vegetation used by wildlife for protection from predators to mitigate weather conditions or to reproduce.

Critical Habitat - (1) Specific areas within the geographic area occupied by a threatened or endangered species at the time it is listed. These areas must have physical or biological features essential to the conservation of the species and which may require special management considerations or protection. (2) Specific areas outside the geographical area occupied by a threatened or endangered species at the time it is listed determined by the Secretary to be essential for the conservation of the species.

Cultural Resource - Any definite location of past human activity identifiable through field survey, historical documentation, or oral evidence; includes archaeological or architectural sites, structures, or places, and places of traditional cultural or religious importance to specified groups whether or not represented by physical remains.

Cultural Site - Any location that includes prehistoric and/or historic evidence of human use or that has important sociocultural value.

Cumulative Effect - The impact which results from identified actions when they are added to other past, present, and reasonably foreseeable future actions regardless of who undertakes such other actions. Cumulative effects can result from individually minor but collectively significant actions taking place over a period of time.

Density Management - Cutting of trees for the primary purpose of widening their spacing so that growth of remaining trees can be accelerated. Density management harvest can also be used to improve forest health, to open the forest canopy, or to accelerate the attainment of old growth characteristics if maintenance or restoration of biological diversity is the objective.

Diameter At Breast Height (dbh) - The diameter of a tree 4.5 feet above the ground.

Dispersed Recreation - Outdoor recreation in which visitors are diffused over relatively large areas. Where facilities or developments are provided, they are primarily for access and protection of the environment rather than comfort or convenience of the user.

Early Seral Stage - See Seral Stages.

Ecosystem - An interacting natural system including living organisms and the nonliving environment. Ecosystems may vary in size. For example, the community of microorganisms in water, the lake which contains the water, the watershed the lake resides in, and the mountain range containing the watershed.

Edge Effect - An ecologically important biological effect that occurs in the transition zone where two plant communities or successionai stages meet and mix.

Endangered Species - Any species defined through the Endangered Species Act as being in danger of extinction throughout all or a significant portion of its range and published in the Federal Register.

Environmental Assessment (EA) - A systematic analysis of site-specific BLM activities used to determine whether such activities have a significant effect of the quality of the human environment and whether a formal environmental impact statement is required; and to aid an agency's compliance with National Environmental Protection Agency when no Environmental Impact Statement is necessary.

Environmental Impact - The positive or negative effect of any action upon a given area or resource.

Environmental Impact Statement (EIS) - A formal document to be filed with the Environmental Protection Agency that considers significant environmental impacts expected from implementation of a major federal action.

Ephemeral Stream - Streams that contain running water only sporadically, such as during and following storm events. NWFP ROD definition: any nonpermanent flowing drainage feature having a definable channel and evidence of annual scour or deposition.

Forest Health - A condition which expresses the forest's relative ability to remain productive, resilient, and dynamically stable over time and to withstand the effects of periodic natural or man-caused stresses such as drought, insect attack, climatic change and changes in management practice and resource demands.

Fragile Nonsuitable - A Timber Production Capability Classification indicating forestland having fragile conditions, which if harvested, would result in reduced future productivity even if special harvest or restrictive measures are applied. These fragile conditions are related to soils, geologic structure, topography, and ground water.

Green Tree Retention - A stand management practice in which live trees as well as snags and large down wood are left as biological legacies within harvest units to provide habitat components over the next management cycle.

> High Level - A regeneration harvest designed to retain the highest level of live trees possible while still providing enough disturbance to allow regeneration and growth of the naturally occurring mixture of tree species. Such harvest should allow for the regeneration of intolerant and tolerant species. Harvest design would also retain cover and structural features necessary to provide foraging and dispersal habitat for mature and old growth dependant species.
>
> Low Level - A regeneration harvest designed to retain only enough green trees and other structural components (snag, coarse woody debris, etc.) to result in the development of stands that meet old growth definitions within 100 to 120 years after harvest entry, considering overstory mortality.

Hiding Cover - Generally, any vegetation used by wildlife for security or to escape from danger. More specifically, any vegetation capable of providing concealment (e.g., hiding 90 percent of an animal) from human view at a distance of 200 feet or less.

Home Range - The area an animal traverses in the scope of normal activities; not to be confused with territory which is the area an animal defends.

Impact - A spatial or temporal change in the environment caused by human activity.

Indigenous - Living or occurring naturally in a specific area or environment.

Intermittent Stream - A stream that flows most of the time but occasionally is dry or reduced to pools.

Landscape Pattern - The number, frequency, size, and juxtaposition of landscape elements (patches) which are important to the determination or interpretation of ecological processes.

Landscape - An area composed of interacting ecosystems that are repeated because of geology, landforms, soils, vegetation, climate, and human influences.

LAU - Landscape Analysis Unit.

Landscape Management - The application of ecosystem management practices to the specific area affected by the PRMP.

Late Seral Stage - See Seral Stages.

Late Successional Reserve - A forest in its mature and/or old growth stages that has been reserved.

Leasable Minerals - Minerals which may be leased to private interests by the federal government, includes oil, gas, geothermal resources, and coal.

Locateable Minerals - Minerals subject to exploration, development, and disposal by staking mining claims as authorized by the Mining Law of 1872 (as amended). This includes valuable deposits of gold, silver, and other uncommon minerals not subject to lease or sale.

Long-Term - The period starting 10 years following implementation of the Resource Management Plan. For most analyses, long-term impacts are defined as those existing 100 years after implementation.

Matrix - "the most connected portion of the landscape". It is generally the predominant vegetative type and therefore exerts the strongest control over the movement of living and non-living things across the landscape (fire, wind, plants, animals, people). The matrix affects the rate at which various disturbances move through the landscape.

Matrix Lands - Federal land outside of reserves and special management areas that will be available for timber harvest at varying levels.

Mature Seral Stage - See Seral Stages.

Mature Stand - A mappable stand of trees for which the annual net rate of growth has peaked. Stands are generally greater than 80-100 years old and less than 180-200 years old.

Mid-Seral Stage - See Seral Stages.

Mining Claims - Portions of public lands claimed for possession of locateable mineral deposits, by locating and recording under established rules and pursuant to the 1872 Mining Law.

Mitigating Measures - Modifications of actions which (a) avoid impacts by not taking a certain action or parts of an action; (b) minimize impacts by limiting the degree or magnitude of the action and its implementation; (c) rectify impacts by repairing, rehabilitating, or restoring the affected environment; (d) reduce or eliminate impacts over time by preservation and maintenance operations during the life of the action; or (e) compensate for impacts by replacing or providing

substitute resources or environments.

Monitoring - The process of collecting information to evaluate if objectives and anticipated or assumed results of a management plan are being realized or if implementation is proceeding as planned.

Multi-layered Canopy - Forest stands with two or more distinct tree layers in the canopy; also called multi-storied stands.

Noncommercial Forest Land - Land incapable of yielding at least 20 cubic feet of wood per acre per year of commercial species; or land which is capable of producing only noncommercial tree species.

Nonpoint Source Pollution - Water pollution that does not result from a discharge at a specific, single location (such as a single pipe) but generally results from land runoff, precipitation, atmospheric deposition, or percolation, and normally is associated with agricultural, silvicultural and urban runoff, runoff from construction activities, etc. Such pollution results in the human-made or human-induced alteration of the chemical, physical, biological, radiological integrity of water.

Nonsuitable Woodland - All fragile nonsuitable forestland.

Noxious Plant - A plant specified by law as being especially undesirable, troublesome, and difficult to control.

Noxious Weed - See Noxious Plant.

Oak savanna - A grassland with an open and often sparse canopy of oak trees

Off-Highway Vehicle (OHV) - Any motorized track or wheeled vehicle designed for cross country travel over natural terrain.

Old-Growth Seral Stage - See Seral Stages.

Patches - Patches are distinct areas different than the general landscape around them.

Peak Flow - The highest amount of stream or river flow occurring in a year or from a single storm event.

Perennial Stream - A stream that has running water on a year round basis.

Plant Association - A plant community type based on land management potential, successional

patterns, and species composition.

Plant Community - An association of plants of various species found growing together in different areas with similar site characteristics.

Prescribed Fire - Introduction of fire under controlled conditions for management purposes.

Proposed Threatened or Endangered Species - Plant or animal species proposed by the USFWS or NMFS to be biologically appropriate for listing as threatened or endangered, and published in the Federal Register. It is not a final designation.

Raptor - Any of the birds of prey, which includes eagles, hawks, falcons, and owls.

Recovery Plan - A plan for the conservation and survival of an endangered species or a threatened species, to improve the status of the species to make continued listing unnecessary.

Redd - The spawning ground or nest for various fishes.

Residual Habitat Area - An area about 100 acres in size of nesting, roosting and foraging habitat encompassing the known activity center for a pair of owls or a territorial single owl.

Resource Management Plan (RMP) - A land use plan prepared by the BLM under current regulations in accordance with the Federal Land Policy and Management Act.

Right-of-Way - A permit or an easement that authorizes the use of public lands for specified purposes, such as pipelines, roads, telephone lines, electric lines, reservoirs, and the lands covered by such an easement or permit.

Riparian Reserves - An area allocated in the plan primarily to protect the riparian and/or streamside zone.

Riparian Zone - Those terrestrial areas where the vegetation complex and microclimate conditions are products of the combined presence and influence of perennial and/or intermittent water, associated high water tables and soils which exhibit some wetness characteristics. Normally used to refer to the zone within which plants grow rooted in the water table of these rivers, streams, lakes, ponds, reservoirs, springs, marshes, seeps, bogs, and wet meadows.

Ripping - The process of breaking up or loosening compacted soil to assure better penetration of roots, lower soil density, and increased microbial and invertebrate activity.

Road - A vehicle route which has been improved and maintained by mechanical means to ensure relatively regular and continuous use. A route maintained solely by the passage of vehicles does

not constitute a road.

Rotation - The planned number of years between the regeneration of an even-aged forest stand and its final cutting.

Rural Interface Areas - Areas where BLM-administered lands are adjacent to or intermingled with privately owned lands zoned for 1 to 20-acre lots or that already have residential development.

Salable Minerals - High volume, low value mineral resources including common varieties or rock, clay, decorative stone, sand, and gravel.

Seral Stages - The series of relatively transitory plant communities that develop during ecological succession from bare ground to the climax stage.
There are five stages:

Early Seral Stage - The period from disturbance to the time when crowns close and conifers or hardwoods dominate the site. Under the current forest management regime, the duration is approximately 0 to 10 years. This stage may be dominated by grasses and forbs or by sprouting brush or hardwoods. Conifers develop slowly at first and gradually replace grasses, forbs, or brush as the dominant vegetation. Forage may be present; hiding or thermal cover may not be present except in rapidly sprouting brush communities.

Mid-Seral Stage - The mid-seral stage occurs from crown closure to the time when conifers would begin to die from competition; approximately age 10 to 40. Stands are dense and dominated by conifers, hardwoods, or dense brush. Grass, forbs, and herbaceous vegetation decrease. Hiding cover for big game is usually present.

Late Seral Stage - Late seral stage occurs when conifers would begin to die from competition to the time when stand growth slows; approximately age 41 to 100. Forest stands are dominated by conifers or hardwoods; canopy closure often approaches 100 percent. Stand diversity is minimal; conifer mortality rates and snag formation are rapid. Big game hiding and thermal cover is present. Forage and understory vegetation is minimal except in understocked stands or in meadow inclusions.

Mature Seral Stage - This stage exists from the point where stand growth slows to the time when the forest develops structural diversity; approximately age 101 to 200. Conifer and hardwood growth gradually decline. Developmental change slows. Larger trees increase significantly in size. Stand diversity gradually increases. Big game hiding cover, thermal cover, and some forage are present. With slowing growth, insect damage increases and stand breakup may begin on drier sites. Understory development is significant in response to openings in the canopy created by disease, insects, and windthrow. Vertical diversity increases. Larger snags are formed.

Old-Growth - This stage constitutes the potential plant community capable of existing on a site given the frequency of natural disturbance events. For forest communities, this stage exists from approximately age 200 until when stand replacement occurs and secondary succession begins again. (Also see definitions of old-growth conifer stand and potential natural community.)

Short-Term - The period of time during which the RMP will be implemented; assumed to be 10 years.

Site Class - A measure of an area's relative capacity for producing timber or other vegetation.

Site Preparation - Any action taken in conjunction with a reforestation effort (natural or artificial) to create an environment that is favorable for survival of suitable trees during the first growing season. This environment can be created by altering ground cover, soil or microsite conditions using biological, mechanical, or manual clearing, prescribed burns, herbicides or a combination of methods.

Slope Failure - See Mass Movement.

Smoke Management - Conducting a prescribed fire under suitable fuel moisture and meteorological conditions with firing techniques that keep smoke impact on the environment within designated limits.

Snag - Any standing dead, partially-dead, or defective (cull) tree at least 10 inches in diameter at breast height (dbh) and at least 6 feet tall. A hard snag is composed primarily of sound wood, generally merchantable. A soft snag is composed primarily of wood in advanced stages of decay and deterioration, generally not merchantable.

Soil Compaction - An increase in bulk density (weight per unit volume) and a decrease in soil porosity resulting from applied loads, vibration, or pressure.

Soil Productivity - Capacity or suitability of a soil for establishment and growth of a specified crop or plant species.

Special Forest Products - Firewood, shake bolts, mushrooms, ferns, floral greens, berries, mosses, bark, grasses, and etc., that would be harvested in accordance with the objectives and guidelines in the PRMP.

Special Status Species - Plant or animal species falling in any of the following categories (see separate glossary definitions for each):

- Threatened or Endangered Species,

- Proposed Threatened or Endangered Species,
- Candidate Species,
- State Listed Species,
- Bureau Sensitive Species
- Bureau-Assessment Species.

Species Diversity - The number, different kinds, and relative abundance of species.

Spotted Owl Habitat Sites - Sites monitored by BLM for spotted owl occupancy during some or all of the years 1985 through 1988, in accordance with BLM's spotted owl monitoring guidelines. These sites are known to have been inhabited by spotted owls at some time in the last dozen years but not necessarily during the 1985-1988 period.

Stand Density - An expression of the number and size of trees on a forest site. May be expressed in terms of numbers of trees per acre, basal area, stand density index, or relative density index.

State Critical - Species for which listing as threatened or endangered is pending; or those for which listing as threatened or endangered may be appropriate if immediate conservation actions are not taken. Also considered critical are some peripheral species which are at risk throughout their range, and some disjunct populations.

State Peripheral or naturally rare - peripheral species refer to those whose Oregon populations are on the edge of this range.

State Threatened and Endangered - Plant or animal species listed by the State of Oregon as threatened or endangered pursuant to ORS 496.004, ORS 498.026, or ORS 564.040.

State Undetermined - Species for which status in unclear. They may be susceptible to population decline of significant magnitude that they could qualify for endangered, threatened, critical, or vulnerable status; but scientific study will be required before a judgment can be made.

State Vulnerable - Species for which listing as threatened or endangered is not believed to be imminent and can be avoided through continued or expanded use of adequate protective measures and monitoring.

Statewide Comprehensive Outdoor Recreation Plan (SCORP) - A plan prepared by the state, which describes and analyzes the organization and function of the outdoor recreation system of the state. The plan provides an analysis of the roles and responsibilities of major outdoor recreation suppliers; an analysis of demand, supply and needs; issue discussions; an action program to address the issues; and a project selection process.

Stream Class - A system of stream classification established in the Oregon Forest Practices Act. Class I streams are those which are significant for: 1) domestic use, 2) angling, 3) water

dependent recreation, and 4) spawning, rearing, or migration of anadromous or game fish. All other streams are Class II. Class II special protection streams are Class II streams that have a significant summertime cooling influence on downstream Class I waters, which are at or near a temperature at which production of anadromous or game fish is limited.

Stream Reach - An individual first order stream or a segment of another stream that has beginning and ending points at a stream confluence. Reach end points are normally designated where a tributary confluence changes the channel character or order. Although reaches identified by BLM are variable in length, they normally have a range of ½ to 1-1/2 miles in length unless channel character, confluence distribution, or management considerations require variance.

Structural Diversity - Variety in a forest stand that results from layering or tiering of the canopy and the die-back, death and ultimate decay of trees. In aquatic habitats, the presence of a variety of structural features such as logs and boulders that create a variety of habitat.

Succession - A series of dynamic changes following disturbance by which one group of plants succeeds another through stages leading to the potential natural community or to climax. The developmental series of plant communities is called a sere and defined stages are called seral stages.

Suitable Woodland - Forestland occupied by minor conifer and hardwood species not considered in the commercial forestland PSQ determination and referred to as noncommercial species. These species may be considered commercial for fuelwood, etc. under woodland management. Also included are low site and nonsuitable commercial forestland. These lands must be biologically and environmentally capable of supporting a sustained yield of forest products.

Survey and Manage Species - A group of amphibians, mammals,bryophytes, mollusks, vascular plants,fungi, lichens, and arthropods that are realatively rare and dependant upon late-successional stands. Each species is placed in one or more categories of differing levels of surveying and protection.

Thermal Cover - Cover used by animals to lessen the effects of weather. For elk, a stand of conifer trees that are 40 feet or more tall with an average crown closure of 70 percent or more. For deer, cover may include saplings, shrubs, or trees at least 5 feet tall with 75 percent crown closure.

Threatened Species - Any species defined through the Endangered Species Act as likely to become endangered within the foreseeable future throughout all or a significant portion of its range and published in the Federal Register.

Timber Production Capability Classification (TPCC) - The process of partitioning forestland into major classes indicating relative suitability to produce timber on a sustained yield basis.

Transient Snow Zone
An area on the landscape between the elevations of 3,500 and 4,500 feet. In this area a mixture of rain and snow events occur in the fall and winter. Rain-on-snow events occur in this area when a storm event producing rain falls on the existing snow pack which can result in an increase in peak flows.

Travel Corridor - A route used by animals along a belt or band of suitable cover or habitat.

Viable Population - A wildlife or plant population of sufficient size to maintain its existence in spite of normal fluctuations in population levels.

Visual Resource Management (VRM) - The inventory and planning actions to identify visual values and establish objectives for managing those values and the management actions to achieve visual management objectives.

Visual Resource Management Classes - Categories assigned to public lands based on scenic quality, sensitivity level, and distance zones. There are four classes. Each class has an objective that prescribes the amount of modification allowed in the landscape.

Water Quality - The chemical, physical, and biological characteristics of water.

Wetlands or Wetland Habitat - Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include, but are not limited to, swamps, marshes, bogs, and similar areas.

Wildlife Tree - A live tree retained to become future snag habitat.

Withdrawal - A designation that restricts or closes public lands from the operation of land or mineral disposal laws.

Woodland - Forestland producing trees not typically used as saw timber products and not included in calculation of the commercial forestland PSQ.

Yarding - The act or process of moving logs to a landing.

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LIST OF PREPARERS

NAME/TITLE	RESPONSIBILITIES
Teresa Coffey, HydroTech.	Soils, Geology, Cumulative Effects
John Dinwiddie, Fuels Specialist	Fire/Fuels/Air Quality
Emily Hale, Park Ranger	Cultural and Historical
Tim Haller, Recreation Planner	Recreation/VRM
Jim Harper, Wildlife Biologist	Terrestrial Wildlife
Douglas Kendig, Biologist	Watershed Analysis Team Lead Riparian Ecosystem /Special Status Plants
Ron Miyamoto, Engineer	Road System
John Osmanski, Forester	Late-Successional Stands
Jon Raby, Fisheries Biologist	Fisheries/ Aquatic Ecosystems
Phil Ritter, GIS Coordinator	Geographic Information
Jim Welden, Forester	Lead Silviculturalist/Young Stands
Jean Williams, Environmental Coordinator	Environmental Coordinator

TABLE OF CONTENT

APPENDIX 1

HUMAN/SOCIAL ASPECT 2

FLOUNCE ROCK ENVIRONMENTAL EDUCATION AND ACEC 2

Fire Suppression Tactics: 2

APPENDIX 2

PHYSICAL ASPECT 3

Water Rights Table #1 3

APPENDIX 3

TERRESTRIAL ECOSYSTEM 4

Special Status Plant Species 4

Terrestrial Wildlife 4

Clarification on Critical Habitat Designation 4

Lost Creek Watershed Special Status Species Occurrence 6

Special Status Widlife Species--1996

Habitat and Occurrence in the Butte Falls Resource Area 11

Spotted Owl and Eagle Sites Reproductive status 20

APPENDIX 4

RIPARIAN ECOSYSTEM 22

Stream Descriptions from 1981 22

APPENDIX 5

AQUATIC ECOSYSTEM 24

Aquatic Habitat Inventory 1997. 24

Fish Species 24

APPENDIX 6

TRANSPORTAION MANAGMENT OBJECTIVES 25

APPENDIX 1
HUMAN/SOCIAL ASPECT

FLOUNCE ROCK
ENVIRONMENTAL EDUCATION AND ACEC
T33S - R2E - SEC. 05,08,17
ACRES - ENV. ED. 532
ACRES - ACEC 15

Fire Suppression Tactics:
ACEC
1. No use of tractors. Restrict falling in Baker cypress stand.

Environmental Education Area
1. No tractor use on the old military road in section 17. Otherwise manage for visual resources.
2. Protect communications sites on top of rock in section 05.

Resource Objectives:
1. Manage for Baker cypress stand, communications sites, and historical sites.

Remarks:
1. Needs management plan.

DISPATCH RESOURCE ADVISOR AND PROJECT INSPECTOR IMMEDIATELY !!!

APPENDIX 2
PHYSICAL ASPECT

Water Rights Table #1

Legal Description	Data Base ID #	Name of Reservoir	Date Water Right Filed	Gallons per Minute
32S., 2E., 33	200	Ulrich	1994	11.35
33S., 2E., 5		Flounce Rock Spring	1994	0.05
33S., 2E., 5	341	Flounce	1994	14.95
33S., 2E., 31	382	Laurelhurst	1994	11.35
33S., 2E., 31	197	A Road	1994	14.95
33S., 2E., 35	324	Summit Prairie	1994	6.45
33S., 3E., 18	340	Smith Creek	1994/1997	4.05
33S., 3E., 29	173	Blue Goose Spring	1994/1997	6.45
33S., 3E., 32	383	Beaver Dam Creek #2	1994	0.55
33S., 3E., 33	348	Beaver Dam Creek	1994	9.55
34S., 3E., 5	350	Vine Maple Creek	1994	21.40

L=Livestock W=Wildlife R=Road Operations F=Prescribed Fire Operations

APPENDIX 3

TERRESTRIAL ECOSYSTEM

Special Status Plant Species

List of Special Status Plant Species Sites in Lost Creek Watershed

Allotropa virgata	33-2E-11
Cupressus bakerii	33-2E-5
Cypripedium montanum	33-1E-15
Lonicera interrupta	33-1E-11
Plagiobothrys glyptocarpus	33-1E-23
Scribnaria bolanderii	33-1E-35
Sedum radiatum ssp. depauperatum	32-1E-35
Sedum stenopetalum ciliosum	33-1E-11

Potential Special Status Plant Species

Cimicifuga elata
Cypripedium fasciculatum
Hesperevax sparsiflora ssp. breviflora
Illimna latibracteata
Lithophragma campanulatum
Mimulus douglasii
Nemacladus capillaris
Perideridia howellii
Romanzoffia thompsonii

Terrestrial Wildlife

Clarification on Critical Habitat Designation

The following are quotes from the Federal Register notice (43 pages) of the designation of Critical Habitat Units for the northern spotted owl. This information is the only guidance statement available from US Fish & Wildlife Service on how these lands should be managed, and it preceeds the NW Forest Plan by two years. Federal Register, 50 CFR Part 17, Vol 57 No 10, Wed Jan 15 1992, pages 1796 - 1838.

Pg 1796. " Critical habitat is defined ... as the specific areas ... on which are found those physical and biological features (i) essential to the conservation of the species, and (ii) that may require special management considerations or protection."

" ... critical habitat serves to preserve options for a species eventual recovery. Critical habitat helps focus conservation activities by identifying areas that contain essential habitat features (primary constituent elements) regardless of whether or not they are currently occupied by the listed species ..." "Aside from the added protection provided under Section 7, the Act does not provide other forms of protection to lands designated as critical habitat."

Pg 1797. "Specific management recommendations for critical habitat are more appropriately addressed in recovery plans, management plans, and through section 7 consultation." Primary Constituent Elements: "Such physical and biological features ... include, but are not limited to, the following: - Space for individual and population growth, and for normal behavior; - Food, water, or other nutritional or physiological requirements: - Cover or shelter; - Sites for breeding, reproduction, rearing of offspring; and - Habitats that are protected from disturbance or are representative of the historic geographical and ecological distributions of a species."

Pg 1803. "The Service's primary objective in designating critical habitat was to identify existing spotted owl habitat and to highlight specific areas where management considerations should be given highest priority to manage habitat." "... the Service relied upon the following principles: - Develop and maintain large contiguous blocks of habitat to support multiple reproducing pairs of owls; - Minimize fragmentation and edge effect to improve habitat quality. - Minimize distance to facilitate dispersal among blocks of breeding habitat; and - Maintain range-wide distribution of habitat to facilitate recovery."

"The definition of 'suitable habitat' was generally equivalent to the structure of Douglas-fir stands 80 or more years of age (with adjustments for local variation or condition)." "Critical habitat units minimize distance between adjacent units, thereby facilitating dispersal and linkage."

Pg 1804. "Since critical habitat designation is not a management plan, there was not a limitation on the size of the area added to any HCA ... . Primary consideration was given to existing suitable habitat and known pairs of spotted owls, particularly where the Service felt that additional protection should be considered and would enhance the existing HCA."

Pg 1805 "Although the designation of critical habitat emphasizes the importance of maintaining suitable habitat for all four constituent habitat elements, nesting and roosting habitat should be emphasized to improve opportunities for successful linkage." "Not all suitable nesting and roosting habitat was included in critical habitat."
Pg 1806. "The emphasis for future management will be on maintaining or developing habitat that has the characteristics of suitable nesting and roosting habitat and to avoid or reduce the adverse effects of current management practices." "The Service analyzed the economic effects of the ... proposal to designate critical habitat."

Pg 1809. " The revised proposed rule for the designation of critical habitat ... published on August 13 1991 ... encompased a total of approximately 8.2 million acres." " As a result of the exclusion process, the Service is designating approximately 1.4 million acres less ..." "The final rule ... encompassing a total of nearly 6.9 million acres ... 62 percent of the total originally identified in the May 6 proposal." 1.2 million acres of Bureau land.

Pg 1801. "State, private, tribal, and other non-Federal lands are not designated as critical habitat even if they are physically situated within the boundaries of critical habitat units."

Pg 1822. "Section 7 prohibitions against the destruction or adverse modification of critical habitat apply to actions that would impair survival and recovery of the listed species, thus providing a regulatory means of ensuring that Federal actions within critical habitat are considered in relation to the goals and recommendations of a recovery plan. As a result of the link between critical habitat and recovery, the prohibition against destruction or adverse modification of the critical habitat should provide for the protection of the critical habitat's ability to contribute fully to the species' recovery."

Table 1. Lost Creek Watershed Special Status Species Occurrence

U.S. FISH & WILDLIFE T&E SPECIES					
SPECIES	STATUS	RANGE (Y/N)	P/A	HABITAT QUALITY	LEVEL OF SURVEY
Peregrine falcon	FE, SE, 1	Y	P	Medium	Thorough
Bald eagle	FT, ST, 1	Y	P	High	Thorough
Northern spotted owl	FT, ST, 1	Y	P	High	Thorough

SPECIES of CONCERN (SoC)					
SPECIES	STATUS	RANGE (Y/N)	P/A	HABITAT QUALITY	LEVEL OF SURVEY
Spotted frog	C, SC , BS, 1	Y	A	Medium	Limited
Cascade frog	SoC, SV, 3	Y	P	Medium	Limited
Foothill yellow legged frog	SoC, SV, 3	Y	U	High	Limited
No. red legged frog	SoC, SU, 3	Y	U	Low	Limited
Tailed Frog	SoC, SV, 3	Y	U	Medium	None
Northwestern pond turtle	SoC, SC, 2	Y	P	Low	Limited
Little willow flycatcher	SoC, 1	U	U	Low	None
Northern goshawk	SoC, SC, 3	Y	P	High	Limited
Tricolored blackbird	SoC, SP, 2	N	A	Low	None
Western burrowing owl	SoC, SC, 3	N	A	Low	None
Fringed myotis	SoC,SV,BS, SM, 3	Y	U	High	Limited
Long eared myotis	SoC, SU,SM,3	Y	P	High	Limited
Long legged myotis	SoC.SU, SM,3	Y	S	Medium	Limited
Townsend's big eared bat	SoC, SC, 2	Y	S	Medium	Limited
Yuma myotis	SoC, SU, 3	Y	S	Medium	Limited
Pacific fisher	SoC, SC, 2	Y	P	Medium	None
SPECIES	STATUS	RANGE (Y/N)	P/A	HABITAT QUALITY	LEVEL OF SURVEY
California wolverine	SoC, ST, 2	Y	U	Medium	None
Coho salmon	PT, SC, 1	Y	A	Medium	Thorough
Klamath Mt. steelhead trout	PT, 1	Y	A	Medium	Thorough
Pacific lamprey	SoC, SV, 3	Y	A	Low	None

Burnell's False Water Penny Beetle	SoC, 4	U	U	Medium	None
Denning's Agapetus caddisfly	SoC, 3	U	U	Medium	None
Green springs Mt. faurlan caddisfly	SoC, 3	U	U	Medium	None
Schuh's homoplectran caddisfly	SoC, 3	U	U	Medium	None
Siskiyou caddisfly	SoC, 3	U	U	Medium	None
Siskiyou chloealtis grasshopper	SoC, 3	U	S	Medium	None
Mardon skipper butterfly	SoC, 2	U	U	Low	None
Franklin's bumblebee	SoC, 4	N	U	Low	None

OTHER (ODFW AND BLM) SPECIAL STATUS SPECIES					
SPECIES	STATUS	RANGE	P/A	HABITAT QUALITY	LEVEL OF SURVEY
Clouded salamander	SU, BS, 3	Y	S	High	Limited
Western toad	SV, 3	Y	S	Medium	None
California mt. kingsnake	SP, AS, 3	N	S	Low	None
Common kingsnake	SP,AS, 3	Y	U	Low	None
Sharptail snake	SV, AS, 4	N	S	Low	None
Black backed woodpecker	SC, AS, 3	Y	U	Medium	None
Flammulated owl	SC, AS, 4	Y	S	Medium	Limited
Grasshopper sparrow	SV, 3	N	A	Low	None
Great gray owl	SV, AS, SM, 4	Y	S	Medium	Limited
SPECIES	STATUS	RANGE	P/A	HABITAT QUALITY	LEVEL OF SURVEY
Greater sandhill crane	SV, 4	Y	S	Low	Incidental

Lewis' woodpecker	SC, AS, 3	Y	S	Med	None
Northern pygmy owl	SU, 4	Y	S	Medium	Incidental
Northern saw whet owl	AS	Y	P	High	Incidental
Oregon vesper sparrow	SC, 3	N	A	Low	None
Pileated woodpecker	SV, AS, 4	Y	P	High	Incidental
Pygmy nuthatch	SV, 4	Y	A	Low	None
Red-necked grebe	SC, 2	Y	S	Low	Incidental
Three-toed woodpecker	SC, AS, 4	Y	U	Medium	None
Western bluebird	SV, AS, 4	Y	S	Medium	None
White headed woodpecker	SC, 3	Y	U	Medium	None
Red tree vole	BS, SM	Y	P	High	Limited
Western gray squirrel	SU, 3	Y	P	High	Incidental
Pacific pallid bat	SV, AS, SM, 3	Y	S	High	Limited
Silver haired bat	SU, SM, 3	Y	Y	Medium	Limited
American marten	SV, AS, 3	Y	S	Medium	None
Ringtail	SU, 3	Y	P	Medium	None

Status Codes:

FE - USFW Endangered - in danger of extinction throughout a significant portion of its range

FT - USFW Threatened - likely to become endangered species within the foreseeable future
SoC - USFW Species of Concern (formerly Federal Candidate 1, 2, 3) -under consideration for listing, but additional information is needed to support a proposal to list under the Endangered Species Act
C - Federal candidate which is likely to become an SoC when new USFW review is completed
PE - Proposed endangered by National Marine Fisheries Service (NMFS)
PT - Proposed threatened by NMFS

SE - State Endangered - in danger of extinction in the state of Oregon
ST - State Threatened - listed as likely to become endangered by the state of Oregon
SC - State Critical - listing is pending, or appropriate, if immediate conservation action not taken
SV - State Vulnerable - listing not imminent, and can be avoided through continued or expanded use of adequate protective measures and monitoring

SP - State Peripheral or naturally rare - populations at the edge of their geographic range, or historically low numbers due to limiting factors
SU - State Unknown - status unclear, insufficient information to document decline or vulnerability

SM - Survey & Manage - Forest plan ROD directs protection of known sites and/or survey for new sites
BS - Bureau Sensitive (BLM) - eligible for addition to Federal Notice of Review, and known in advance of official publication. Generally these species are restricted in range and have natural or human caused threats to their survival.
AS - Assessment Species (BLM) - not presently eligible for official federal or state status, but of concern which may at a minimum need protection or mitigation in BLM activities.

1 - Oregon Natural Heritage Rank, critically imperiled throughout its range
2 - Oregon Natural Heritage Rank, imperiled throughout its range
3 - Oregon Natural Heritage Rank, not rare, threatened throughout its range
4 - Oregon Natural Heritage Rank, not rare, apparently secure throughout its range

P/A Presence:
P - Present
S - Suspected
U - Uncertain
A - Absent
T - Possibly transitory

Habitat quality:
H - High
M - Medium
L - Low
A - Absent

SPECIAL STATUS WILDLIFE SPECIES--1996
HABITAT AND OCCURRENCE IN THE BUTTE FALLS RESOURCE AREA

THREATENED AND ENDANGERED SPECIES

Peregrine falcon (Falco peregrinus)

Primary habitat is tall cliffs. Three active sites occur in the Medford district. Occasional sightings are made during the winter months, but these are thought to be migrating individuals. Forest lands provide habitat for prey species for peregrine falcons. Prey is mostly birds, especially doves and pigeons. Peregrines also prey on shorebirds, waterfowl, and passerine birds. There are two sets of potential nesting cliffs in the watershed.

American bald eagle (Haliaeetus leucocephalus)

Six nest sites are known in the Medford BLM district, with 2 on adjoining private lands. Four of these are within the Butte Falls Resource area. Two active nesting sites are within the Lost Creek watershed. Several eagles winter in the vicinity. In Oregon, the majority of nests (84%) are located within one mile of lakes, reservoirs, large rivers, and coast estuaries. Nest trees are larger, dominant or co-dominant trees in the stand and are usually components of old growth or older second growth forests. Prey is fish, waterfowl, small mammals (rabbits, etc.), and carrion.

Northern spotted owl (Strix occidentalis caurina)

Old growth coniferous forest is preferred nesting, roosting and foraging habitat, or areas with some old growth characteristics with multi-layered, closed canopies with large diameter trees with an abundance of dead and down woody material. Northern spotted owls commonly nest in cavities 50 or more feet above the ground in large decadent old growth trees. Other nest sites include large mistletoe clumps, abandoned raptor nests, and platforms formed by whorls of large branches. Over 200 northern spotted owl "core areas", 100 acres of the best habitat around activity centers for known sites (as of 1/1/94) have been designated and mapped as late successional reserves. Prey is primarily small arboreal mammals, such as flying squirrels, woodrats, voles, etc. and occasionally small birds. There are 14 historic owl sites within the watershed. Ten of those were active in either 1995 or 96.

FEDERAL SPECIES of CONCERN (SoC)

Spotted frog (Rana prettiosa)

Spotted frogs are likely extirpated from the Medford district BLM lands. Their habitat is marshy edges of ponds, lakes, or slow moving streams with permanent water where the bottom is soft and muddy. The nearest known population is the Wood River in Klamath County.

Cascade frog (Rana cascade)

Found in the Cascade mountains, above 2600 feet, on the east side of the District. They are most commonly found in small pools adjacent to streams flowing through meadows. They are also found in small lakes, bogs, and marshy areas that remain damp thorough the summer.

Foothill yellow legged frog (Rana boylii)

Habitat is permanent streams with rocky, gravelly bottoms. Distribution is west of the Cascade crest from sea level to 1800 feet. These frogs are closely associated with water.

Northern red legged frog (Rana aurora)

Red legged frogs prefer slack water of ponds and low gradient streams with emergent vegetation for reproduction. These frogs are found in lower elevations and can be found during the summer months up to 1000 feet from standing water in humid, old growth forests and moist meadows.

Tailed frog (Ascaphus truei)

Habitat is cold, fast flowing permanent streams in forested areas. Temperature tolerance range is low, 41-61 degrees fahrenheit. Tailed frog are closely tied to water.

Northwestern pond turtle (Clemmys marmorata marmorata)

Live in most types of freshwater environments with abundant aquatic vegetation, basking spots, and terrestrial surroundings for nesting and over-wintering. Some northwestern pond turtles leave water in late October to mid-November to overwinter on land. They may travel up to 1/4 mile from water, bury themselves in duff and remain dormant throughout winter. Turtles have been found to generally stay in one place in areas with heavy snowpack, but may move up to 5-6 times in a winter in areas with little or no snow. General habitat characteristics of overwintering areas appear to be broad. There may be specific micro habitat requirements, which, are poorly understood at this time. In many areas, predation on the hatchlings and competition from bullfrogs, bass, and other exotic species is limiting population levels. Adult turtles are relatively long lived, but as the adults age, recruitment is not occurring at levels which can maintain future healthy populations.

Little willow flycatcher (Empidonax trailii brewsteri)

Subspecies of the willow flycatcher group. Willow flycatchers are common in mountain meadows along streams and in dry upland pastures.

Northern goshawk (Accipiter gentilis)

Goshawks are found in a variety of mature forest types, including both deciduous and conifer types. Dense overhead foliage or high canopy cover is typical of nesting goshawk habitat. Perches where they pluck their prey, known as plucking posts, are provided by stumps, rocks, or large horizontal limbs below the canopy. There have been historic detections in the watershed, with only one nest identified.

Tricolored blackbird (Agelaius tricolor)

Tricolored blackbirds are found in the interior valleys of southern Oregon, near freshwater marshes and croplands. Individuals have been reported near Roxy Ann Peak, in Sams valley, and near Table Rock.

Western burrowing owl (Speotyto cunicularia)

A viable population no longer exists in the Rogue River Valley, where they were formerly present. May occasionally be present in winter. Habitat is sagebrush steppe, grasslands, pastures, and airports where vegetation is sparse and terrain is level.

Fringed myotis bat (Myotis thysanodes)

Fringed myotis is a crevice dweller which may be found in caves, mines, buildings, rock crevices, and large old growth trees. They have been captured in openings and in mid-seral stage forest habitats. Food consists of beetles, butterflies, and moths.

Long eared myotis (Myotis evotis)

A crevice dweller found in coniferous forests in the mountains. Individuals are frequently encountered in sheds and cabins. They have also been found beneath the loose bark of trees. They seldom reside in caves, but may occasionally use caves as a night roost. They are not known to occur in large colonies.

Long legged myotis (Myotis volans)

Long legged myotis is an open forest dweller which is found in small pockets and crevices in rock ledges, caves, and buildings. When in caves, they hang in clumps in deep twilight zones.

Pacific Townsend's big-eared bat (Plecotus townsendii)

Roost in mines, caves, cavities in trees, and attics of buildings. They have low tolerance to changes in temperature and humidity and removal of trees around these sites may change airflow patterns to make the area less desirable as a hibernaculum, maternity, or roosting site. Food consists primarily of moths, and other arthropods.

Yuma myotis (Myotis Yumanensis)

Yuma myotis is commonly found in human structures, closely associated with water nearby. They will use caves as night roost areas. The species is colonial and hangs in a closely clumped group, often under bridges, in mines and caves.

Fisher (Martes pennanti pacifica)

Habitat is mature and old growth forests. They appear to be closely associated with riparian areas in these forests. In a study done in Trinity County, California, a preference was shown for conifer forests with some hardwoods present. They seem to prefer 40-70% canopy cover. They mainly use large living trees, snags and fallen logs for denning. Occasional sightings on the Medford district, but little information is available as to

distribution and density. There is an ongoing telemetry study on fisher on USFS lands and one radio tagged animal has traveled into the watershed.

California wolverine (Gulo gulo luteus)

Wolverine use Douglas fir, mixed conifer forests. Historic sightings near Medford BLM lands have occurred at White Rock Creek near Oregon Caves (1975) and near Dry Creek, east of Medford, in 1970. Recent wolverine sightings have been reported by fur trappers in the Rogue River National Forest lands adjoining BLM lands. Large areas of medium or scattered mature timber and ecotone areas around cliffs, slides, swamps, and meadows are important habitat components. They appear to prefer remote areas away from humans. Wolverines may be found in higher elevations in summer and lower elevations in winter.

Coho salmon (Oncorhynchus kisutch)

Coho are present in most of the larger lower elevation rivers and larger perennial streams on the district, including North Fork Butte Creek adjacent to the sale.

Summer and winter steelhead trout (Oncorhynchus mykiss)

Steelhead are present in most of the larger streams on the district in the Rogue River drainage system.

Pacific lamprey (Lampetra tridentata)

Present in the Rogue River and larger tributaries. Migrates up river from the ocean and reproduces in the Rogue, Illinois, and Applegate rivers and larger perennial tributary creeks. Little habitat information is available.

Burnell's false water penny beetle (Acneus burnelli)

This species has not been found in the Medford BLM district, but could be present. Adults are found along small, rapid, low elevation streams, frequently near waterfalls. Larvae were found in rapid sections of a stream in pools of quiet water protected form any current by large boulders. This species has been found in Coos Co., Upper Middle Creek. 15 miles SW of Powers, OR.

Denning's agapetus caddisfly (Agapetus denningi)

This species has not been found in Medford BLM district, but could be present. No habitat information is available. The only information available is from the life history of A. taho, a similar species, which is found in cool, mid to large size streams of moderate gradient in forested areas over a large elevation range. A single specimen was collected in Rogue River National Forest.

Green springs Mt. farulan caddisfly (Farula davisi)

Species of Farula inhabit cool, highly humid areas. This species was collected near a small stream with a marshy area nearby. One is probably the habitat. Two adult specimens were collected from Green Springs Mt., 10 miles east of Ashland near a large stream.

Schuh's homoplectran caddisfly (Homoplectra schuhi)

Larvae are found in spring-seepage habitats in forested montane areas. Homoplectra sp. are found in streams with moderate to close shading from a forest canopy with most sites having a mixed deciduous- conifer canopy. The distribution of the species appears to be limited with specimens found in the Cascade and Coast range mountains of southwestern Oregon and northern California, where suitable habitat is found.

Siskiyou caddisfly (Tinodes siskiyou)

Adult collection records indicate the larvae are associated with mid-size streams, with moderate to dense shading from a mixed hardwood/conifer over-story. Adults have been collected adjacent to both cool, spring-fed streams and from streams with a high annual temperature range. Members of this genus have been found from the coastal mountains of northern Calif. and from 2 disjunct populations in Oregon, one from the Squaw Lakes region of the Rogue River National Forest, 10 miles SW of Medford.

Siskiyou chloealtis grasshopper (Chloealtis aspasma)

This species has been found in the Siskiyou Mountains near Mt. Ashland and near Willow Lake. Appears to be associated with elderberry plants. Females lay eggs in the pith of elderberry plants.

Mardon skipper butterfly (Polites mardon)

Only known in four localities, two in Washington state, one in Del Norte County coastal mountains, and the fourth in high mountain meadows along the summit of the Cascade Mountains in Jackson and Klamath Counties. They are found in wet mountain meadow habitats.

Franklin's bumblebee (Bombus franklini)

Franklin's bumblebee has been found in herbaceous grasslands between 1400-4000 ft. elevation. Activity spans the entire blooming season, so they do not appear restricted to a particular host or flower. Adults probably present and in active flight from May (on warm sunny days) through early September. Range restricted to southwestern Jackson County, Oregon, perhaps southeastern corner of Josephine County, perhaps part of northern California.

OREGON STATE SENSITIVE SPECIES

Clouded salamander (Aneides ferreus)

Habitat requirements are forest and forest edges from sea level to 1500 meters. There is a correlation between clouded salamander abundance and large conifers as well as down woody material. They occur mainly under loose bark in decayed, standing and fallen snags, and stumps. They have been found as high as 20 feet in trees. May also be found

in cracks in cliff rocks, under moss and leaf litter.

Western toad (Bufo boreas)

Largely terrestrial, found from sea level to high mountains. They often use rodent burrows. They are nocturnal during dry weather, and may forage in daytime on rainy or overcast days. Optimal habitat is humid areas with dense undergrowth. They have been found beneath bark and within decayed wood in large Douglas fir logs, especially those partially submerged in water. Breed in ponds, pools, and slow moving water in streams. In the Oregon Cascades, they may prefer mud bottomed shallows of lakes and ponds.

California mountain kingsnake (Lampropeltis zonata)

Habitat includes oak and pine forests. Found under or inside rotting logs and in talus areas. They are not common, and are mostly found in the western part of the District.

Common kingsnake (Lampropeltis getulus)

In Oregon, they are found only in Douglas, Jackson, and Josephine Counties in the more mesic river valleys. Common kingsnake inhabit oak/pine woodlands, open brushy areas, and river valleys, often along streams, and in thick vegetation. They may also be found in farmlands, especially near water areas.

Sharptail snake (Contia tenuis)

Habitat is conifer forests and oak grassland edges. Found in rotting logs, moist talus, under rocks, boards, or other objects, mostly in interior valleys.

Black-backed woodpecker (Picoides arcticus)

Presence is undetermined in the Medford BLM district. Has been documented in Cascade Mountains in Jackson County and in the Siskiyou Mountains in Josephine County. In Oregon, the black-backed woodpecker tends to occur in lower elevation forests of lodgepole pine, ponderosa pine, or mixed pine/conifer forests. Dead trees used for foraging have generally been dead three years or less.

Flammulated owl (Otus flammeolus)

Habitat is a mosaic of open forests containing mature or old-growth ponderosa pine mixed with other tree species. In California, habitat included conifer and black oak. Nests mainly have been located in abandoned northern flicker or Pileated woodpecker cavities. The presence of dense conifers for roosting may be a necessary habitat components. Feeds mostly on insects. May also eat other arthropods and small vertebrates.

Grasshopper sparrow (Ammodramus savannarum)

Grasshopper sparrows inhabit grasslands which have some shrubs. Populations have been reported near White City and Eagle Point in Jackson County.

Great gray owl (Strix nebulosa)

Habitat preference is open forest or forest with adjoining deep-soil meadows. Nest in broken top trees, abandoned raptor nests, mistletoe clumps, and other platforms created by whorls of branches. Majority of nests in one study were in over-mature or remnant stands of Douglas fir and grand fir forest types on north facing slopes. Probably found in low densities across the district. There are several meadows in the sale vicinity where great grays could occur.

Greater sandhill crane (Grus canadensis tabida)

A spring and summer resident of Oregon, sandhill cranes roost, nest, and rear young in wet meadows, including wild, irrigated hay meadows and shallow marshes. The cranes may use agricultural croplands for feeding during non-nesting season. Sandhill cranes have been observed on the Ashland Resource Area near Howard Prairie and Hyatt Lake and in the Butte Falls Resource area near the communities of Prospect and Butte Falls. There are some ponds and marshy areas near the sale.

Lewis' woodpecker (Melanerpes lewis)

These woodpeckers breed sparingly in the foothill areas of the Rogue and Umpqua river valleys in Douglas, Jackson, and Josephine counties. Habitat preference is hardwood oak stands with scattered pine near grassland shrub communities. Breeding areas in the Rogue valley are uncertain. In some locales, the woodpeckers breed in riparian areas having large cottonwoods and in oak conifer woodlands. They usually do not excavate nest cavities, but most often use cavities excavated by other woodpecker species. They winter in low elevation oak woodlands.

Northern pygmy owl (Glaucidium gnoma)

Believed to be present across district. Population numbers and trends are unknown. Habitat needs are not clear, but the species is regularly recorded in forested areas of numerous types and age classes in Oregon, most commonly along edges of openings such as clearcuts or meadows. Nests in tree cavities excavated by woodpeckers. Feeds on insects, small vertebrates and birds.

Northern saw-whet owl (Aegolius acadicus)

Believed to be present across the district. Population numbers and trends are unknown. Habitat is dense conifer and mixed conifer/hardwood forests. Nest in abandoned woodpecker holes and natural cavities. Feed on small mammals and birds.

Oregon vesper sparrow (Pooecetes gramineus) Western Interior Valleys Only

Found in dry, open grasslands, farmlands, forest clearings, and sagebrush.

Pileated woodpecker (Dryocopus pileatus)

Pileated woodpeckers are common across the Medford BLM district. They are found mainly in old growth and mature forests, but can feed in younger forests and clearcuts. A new nest is excavated each year. They mainly use dead trees that have the strength to

handle a nest cavity that averages 8 inches wide and 22 inches deep (≥20 inches dbh). Pileated woodpeckers excavate an new nest each year, and need 1-2 hard snags per 100 acres. Studies show that the Pileated woodpeckers need about 45 large trees with existing cavities in their home range (300-1000 acres) to provide roosting habitat.

Pygmy nuthatch (Sitta pygmaea)

Habitat is mature and old growth ponderosa pine, especially open stands with less than 70% canopy. The birds will forage in young ponderosa pines. It nests and roosts in cavities more than 20 feet from the ground that are located in large dead or decaying ponderosa pines which usually exceed 20 inches dbh. It excavates its own nest cavities which are often started in a fissure in a soft snag. Found in the Cascade mountains. Pygmy nuthatch populations drop significantly with timber harvest and snag removal.

Three toed woodpecker (Picoides tridactylus)

Presence is undetermined in the Medford BLM district. Range is along the crest of the Cascade Range and eastward. Generally found in higher elevation forests, above 4000 feet. In eastern Oregon, three-toed woodpeck nest and forage in lodgepole pine forests. They are occasionally found roosting . emlock and Engelmann spruce trees in mature and over-mature mixed conifer forests. rk beetle larvae are primary food source.

Western bluebird (Sialia mexicana)

In western Oregon, western bluebirds nest in open areas near farms and in clearcuts in standing snags. They nest in natural cavities, old woodpecker holes, and in nest boxes.

White headed woodpecker (Picoides albolarvatus)

Presence in the BLM Medford district is undetermined. White headed woodpeckers occur in ponderosa pine and mixed ponderosa forests. They forage mainly on trunks of living conifers for insects. Nest cavities are within 15 feet of ground in dead trees which have heart rot. Standing and leaning snags and stumps are used. Area is in periphery of known range.

California red tree vole (Arborimus pomo)

An arboreal vole which lives in Douglas fir, spruce, and hemlock forests. Food consists entirely of needles of the tree in which they are living. They build a bulky nest, up to the size of a half bushel measure in the branches, usually near the trunk, 15-100 feet above the ground. The nest becomes larger with age, and may be occupied by many generations.

Western gray squirrel (Sciurus griseus)

Arboreal squirrel that is found in oak, oak-pine, hardwood-mixed conifer, and mixed conifer forests. Feeds mostly on acorns and conifer seeds. Nests in tree cavities or in nests made of sticks and shredded bark.

Pallid bat (Antrozous pallidus)

This bat is a crevice dweller. Rock crevices and human structures are used as day roosting sites. Recent radiotelemetry studies indicate that these bats also use interstitial spaces in the bark of large conifer trees as a roost site. One colony of pallid bats was observed roosting in a hollow tree. Food consists of beetles, grasshoppers, moths, and other insects found on or near the ground or on grasses or shrubs.

Silver-haired bat (Lasionycteris noctivagans)

The species is a tree dweller, living mostly under bark and in tree trunks. It may also be found roosting in foliage of trees. Silver haired bats are rarely found in human structures.

American martin (Martes americana)

Martin inhabit mature and old growth forests that contain large quantities of standing and downed snags and other coarse downed woody material, often near streams. They often use down logs for hunting and resting. They feed on small mammals, birds, fruits, and insects.

Ringtail (Bassariscus astutus)

Ringtails are most commonly found in areas having cliffs, rocky terrain near water, riparian hardwoods, and sometimes conifers. They nest in hollow trees, brush piles, caves, and abandoned buildings. They are encountered infrequently across the District.

Spotted Owl and Eagle sites in the Lost Creek Watershed. Reproductive status by year updated through the 1997 season.

Table 2

Site No.	Site Name	Last yr active	Last yr young	92	93	94	95	96	97
2003	Old Lost One	97	89	NR	NR	R0	NR	R0	NR
0953	Taggarts Creek	97	94	R1	R1	R1	NR	R0	NR
2058	Fawn Butte	97	96	NR	NR	R2	NR	R1	NR
2276	Cascade Flounce	96	96	R1	NR	R1	NR	R2	NO
2221	Be Lost	96	92	R1	NR	NR	NR	NR	NO
2220	Smith Creek	97	96	R1	NR	R2	NR	R2	NR
1831	Blue Goose	97	97	R2	NR	NR	NR	R1	R2
2359	Round Mountain	92	--	SM	NO	NO	NO	NO	NO
3561	Olson Mountain	97	--	SM	SM	SM	SF	NR	NR
2360	SF Vine Maple	97	--	NO	NR	NR	SM	NO	NR
4036	Lower Lost Floras	97	--	--	SM	SM	SM	--	NR
3562	Upper Floras (pvt)	94	--	SF	SM	SM	NO	--	--
4465	McCleod Pit	97	97	--	--	--	--	--	R1
	Dead Dog (USFS #347)	90	--	UN	NO	NO	--	--	--
2686	Garfield (USFS #321)	92	--	UN	UN	--	--	--	--
649	S.L.C. Bald Eagle	97	97	R1	R0	UN	R1	R1	R2
673	M.P.P.C. Bald Eagle	97	97	R2	R1	R2	R0	R1	R2
	F.R. Golden Eagle	93	93	NO	R1	NO	NO	NO	NO

Legend:

UN Reproduction unknown for year.
-- No survey or information, or site not located yet.
NR Pair present, but not reproductive for year.
R1 Pair reproductive, followed by number of young.
NO No response, site presumed not occupied.
SM Single male.
SF Single female.

Terrestrial Wildlife Report for the Lost Creek Watershed Analysis September 16 1997
Jim Harper (Wildlife Biologist), with input from Linda Hale (BLM), Fred Wahl (USFS),
John Thiebes and Simon Wray (ODFW). x:/users/jharper/h2oshed/lostwild.wpd

APPENDIX 4

RIPARIAN ECOSYSTEM

Stream Descriptions from 1981

Beaver Dam Creek

Recorded 6 active beaver dams from 2 to 5 feet high and 15 feet to 250 feet across with pools 3 feet to 6 feet deep with cutthroat trout 2 inches to 12 inches long. 2 abandoned dams existed which were filled with silt. A cattle exclosure about 250 feet from the stream limited the amount of grazing along most of the stream. Outside the exclosure grazing was reported as extensive. Blacktailed deer and elk sign were reported. Some damage to the bank was reported where elk trails crossed the stream. Old clearcuts were reported along the stream and in the uplands which modified the riparian vegetation to early seral species. Shade over stream was estimated at about 20%. Associated logging roads contributed sediments to the stream. Fish were reported throughout Beaver Dam Creek.

Round Mt Creek 33-3E-28

No grazing impacts. 1 Pacific giant salamander. No erosion reported. No loss in shade from select cut timber harvest. Lots of old logging debris in channel described as good cover habitat. Upstream sediment source from private logging.

Vine Maple Creek 34-3E-5, 32, 31 and 33-3E-32

Vine maple, pacific yew, willow, Doug-fir, Grand Fir, Western hemlock. Pacific giant salamander, frogs, deer and elk sign. No cattle sign. Old select cut throughout area. Generally 80% shade over stream. Many old logging slash debris dams in the channel. Old growth corridor next to stream bank with select cut away from bank in first 1/4 mile. Clear-cut in middle of 2nd 1/4 mile. Up stream logging on private land contributes a large amount of sediment.

Vine Maple - North Tributary 33-3E-32

Logging may have destroyed fish habitat in this section. Unsurfaced roads causes most erosion. High levels of silt and sand deposits in stream. Partial cut of timber stand. Logging debris chokes stream and in places diverts flow into bank. No grazing impacts observed.

Parsnip Creek (1.3 miles). Fish were reported throughout Parsnip Cr. Other fauna included red legged frogs, elk and deer sign and a long tailed weasel. Extreme sediment problems were reported as a result of the old railroad bed and a tributary diverted down 2100 feet of road along the left bank. Clear- cutting and select cut are reported throughout. Canopy cover ranges from 30% to 60%. The first 1/4 mile contains a marshy area with as many as 6 different channels. Beaver dams are reported throughout the second 1/4 mile, one in the third, fourth and fifth 1/4 mile. The largest is 5 feet high and 200 feet across and 8 feet deep. A ½ acre marshy area is reported in the fourth 1/4 mile. Clearcuts on both banks in the 4th and 5th 1/4 mile.

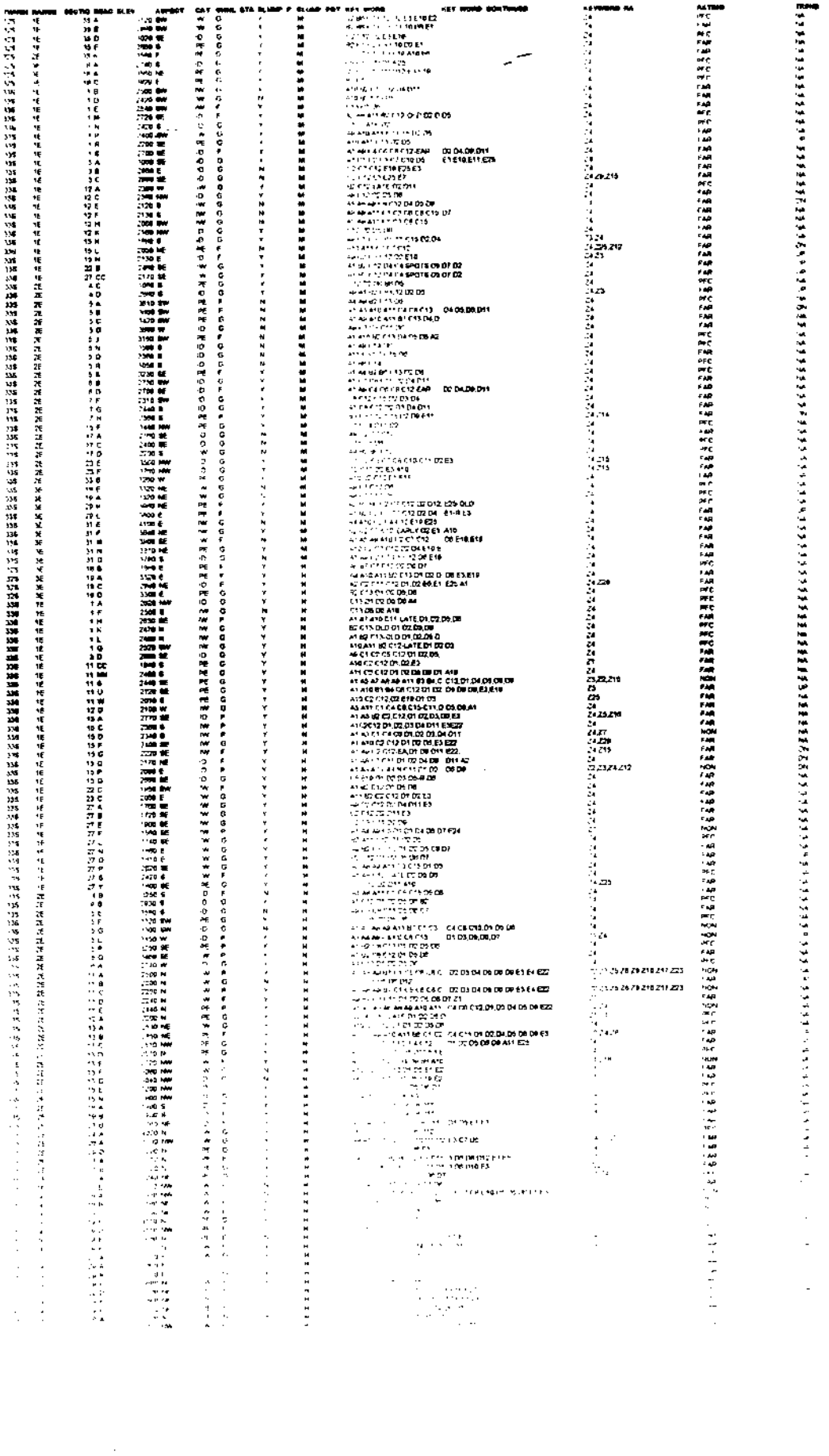
Lost Creek Trib 33-1E-11

Yew, oak, madrone, alder, and bigleaf maple were dominant species. Mosaic of woods, grasslands and chaparral. Forest canopy over stream ranged from 20% to 75%. Mixed conifer

stands with select harvest occurred in uplands. Grazing damage ranges from light to moderate to high - higher by the lake.

Lost Creek Trib 34-2E-5

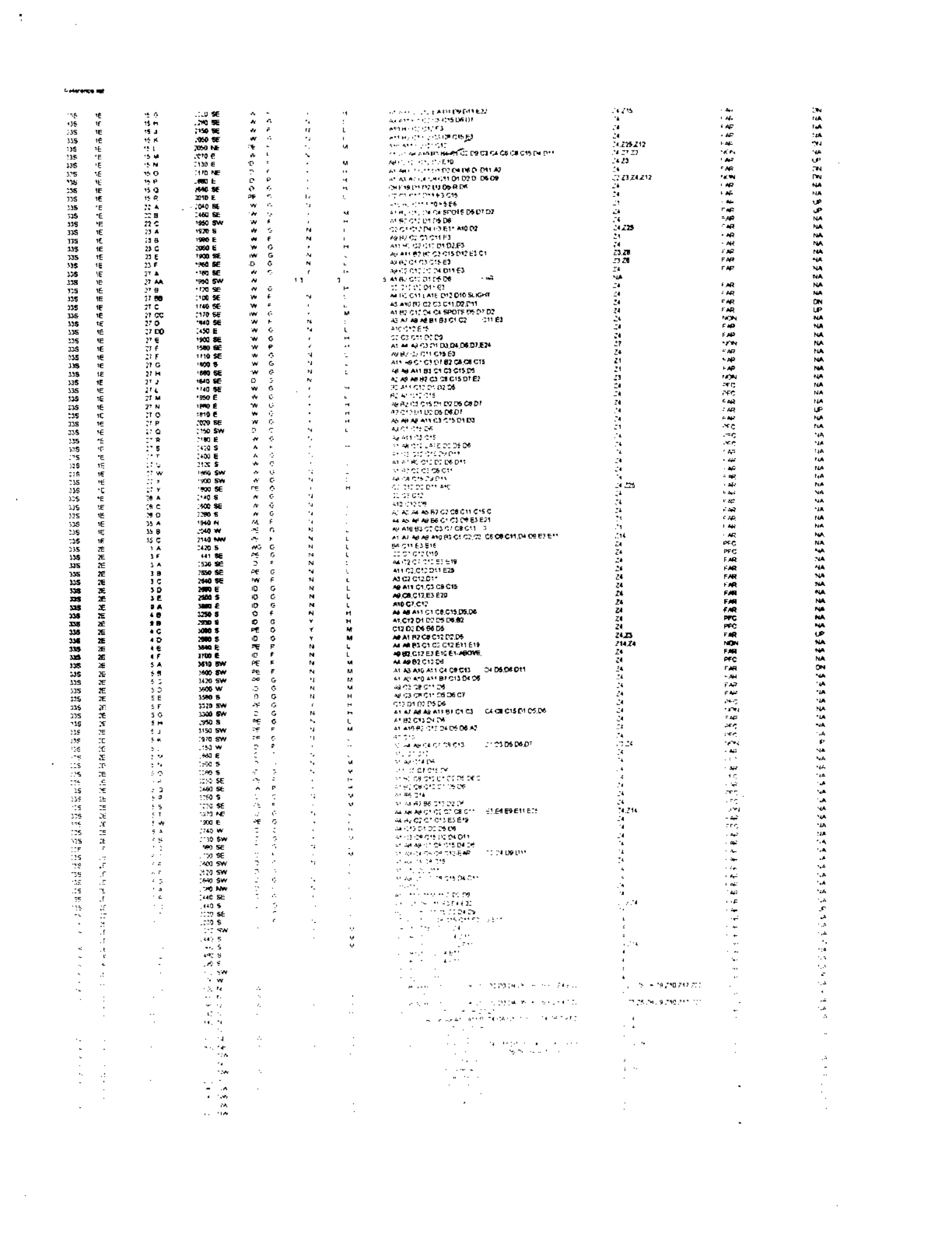
Yew, vine maple, Douglas fir, abundant grand fir, horsetail, and grasses were reported. Very stressed ecosystem due to siltation. 4 Pacific giant salamanders were found. Erosion from roads, harvest operations, skid trail in streams. Many logging debris jams in stream capturing sediment. Loss of riparian canopy. 2 large bank slumps were noted. In 2nd 1/4 mile a large bank slide 75 feet long and 200 feet high occurred and created mud flat with horsetail garden. Selective harvest removed effective Douglas-fir overstory canopy.



García

Reference set

TWNSH	RANGE	SECTIO	REAC	ELEV	ASPECT	CATE	CHNL_STA	SLUMP_PR	SLUMP_POT	KEY_WORD	KEY_WORD_CONTINUED	KEYWORD_RA	RATING	TREND_
32S	1E	35	A	[illegible]20	SW	W	G	Y	M	[illegible] E25		Z4	[illegible]	NA
32S	1E	35	B	2390	SW	W	G	Y	M	[illegible] D5 E1 E		Z4	FAR	NA
32S	1E	35	C	3040	SE	O	G	N	L	A1 A7 A8 A9 [illegible] C7 C11	D4 E3 E10 E11 E25	Z2 Z4 Z14	[illegible]	DN
32S	1E	35	D	3070	SE	O	G	Y	M	[illegible] E19		Z4	PFC	NA
32S	1E	35	E	2900	S	PE	G	Y	M	[illegible] C10 D2 E1		Z4	FAR	NA
32S	1E	35	F	2940	E	O	F	N	L	A1 [illegible] A8 A9 B2 C2 C3	D4 E3 E10 A13	Z2 Z4	FAR	DN
32S	1E	35	G	2940	SE	D	G	N	L	[illegible] E25		Z4	FAR	NA
32S	2E	33	A	3400	SE	D	F	N	L	A4 C2 C[illegible] E25 B0 E1		Z4	FAR	NA
32S	2E	33	B	3590	NE	PE	G	N	L	B6 C2 C[illegible] E25 B2		Z4	FAR	NA
32S	2E	33	C	2490	S	W	G	N	L	A4 A8 B[illegible] C2 C11 E25		Z4 Z8	[illegible]	NA
32S	2E	33	D	3380	SE	PE	G	N	L	A1 A10 B2 C2 C3 C7 C12	Z4 E3 E19	Z4	FAR	NA
32S	2E	33	E	3500	SE	PE	G	N	L	B2 C2 C[illegible] E25 A10 D2 E1		Z4	FAR	NA
32S	2E	33	F	3300	E	PE	G	N	L	A1 A10 B2 C2 C5 C7 C11 D4		Z4	FAR	NA
32S	2E	33	G	3500	SE	PE	P	N	L	A3 A4 A8 A9 A13 C2 C3 C8 C	Z3 E11 C7	Z4 Z16	NON	NA
32S	2E	33	H	3370	E	PE	F	N	L	A8 A9 C2 C3 C7 C11 D12 E3		Z4	FAR	DN
32S	2E	33	J	3530	S	PE	G	N	L	A8 A9 C1 C2 C3 C11 E19 E3		Z4	FAR	NA
32S	2E	33	K	3580	E	PE	G	Y	M	C2 C7 C12 E3 E19 A10 E6		Z4	FAR	NA
32S	3E	8	A	2740	S	O	G	Y	M	C8 C12 D2 D5 E25		Z4	PFC	NA
32S	3E	18	A	3560	NE	PE	G	Y	M	B2 C2 C12 D2 D12 E3 E19		Z4	PFC	NA
32S	3E	18	B	3860	E	PE	F	Y	H	A6 B1 C2 C12 D7 D6 D7		Z4	PFC	NA
32S	3E	18	C	3920	E	PE	G	Y	M	B2 C13 D2		Z4	PFC	NA
32S	3E	19	A	3330	E	PE	F	Y	H	A4 A10 A11 B2 C12 D1 D2 D3	D6 E3 E19	Z4	FAR	NA
32S	3E	19	C	2980	NE	O	F	Y	H	A2 C2 C11 C12 D1 D2 E6 E10	E25 A1	Z4 Z29	FAR	NA
32S	3E	19	D	3300	E	PE	G	Y	H	B2 C13 D1 D2 D5 D6		Z4	PFC	NA
33S	1E	1	A	2620	NW	D	G	Y	H	C13 D1 D2 D5 D6 A4		Z4	PFC	NA
33S	1E	1	B	2500	SW	A	G	Y	M	A10 B2 C12 C2 D4 D11		Z4	FAR	NA
33S	1E	1	C	2020	W	A	G	N	L	B2 C12		Z4	FAR	NA
33S	1E	1	D	2420	SW	W	G	N	M	A10 B2 C11 D5		Z4	PFC	NA
33S	1E	1	E	2540	SW	W	F	Y	M	C12 D1 D6		Z4	FAR	NA
33S	1E	1	F	2500	S	W	G	N	H	C12 D5 D6 A12		Z4	FAR	NA
33S	1E	1	G	2550	SW	O	G	N	L	B2 C13 D11		Z4	PFC	NA
33S	1E	1	H	2630	SE	W	P	[illegible]	H	A1 A7 A10 C11-LATE D1 D2 D5 D6		Z4	PFC	NA
33S	1E	1	K	2410	N	W	G	Y	H	B2 C13 OLD D1 D2 D5 D6		Z4	FAR	NA
33S	1E	1	L	2400	N	W	G	Y	H	A1 B2 C13-OLD D1 D2 D5 D6		Z4	PFC	NA
33S	1E	1	M	[illegible]	SE	D	F	Y	M	A2 A8 A11 B2 C12 OLD D2 D6 D5		Z4	PFC	NA
33S	1E	1	N	2420	S	D	G	Y	M	C13-LATE D2		Z4	PFC	NA
33S	1E	1	O	2340	NE	M	G	Y	L	A4 B2 B5 C12 LATE D2 D12		Z4	PFC	NA
33S	1E	1	P	2400	SW	W	G	[illegible]	M	A9 A10 A11 C3 C15 D2 D5		Z4	PFC	NA
33S	1E	1	Q	[illegible]20	SW	W	G	Y	H	C10 A11 A2 C12 LATE D1 D2 D3		Z4	FAR	NA
33S	1E	1	R	[illegible]	SE	PE	G	Y	M	A10 A11 C12 D2 D6		Z4	[illegible]	NA
33S	1E	1	S	[illegible]	SE	C	F	[illegible]	M	A1 A9 C4 C5 C8 C12 EAR	C2 D4 D9 D11	Z4	[illegible]	UP
33S	1E	[illegible]	A	[illegible]20	SE	[illegible]	G	Y	M	A1 C1 C2 C3 C7 C10 D6	E3 E19 E11 E25	Z4	[illegible]	NA
33S	1E	[illegible]	G	[illegible]40	E	D	G	N	M	C2 C7 C12 E19 E25 E7		Z4	[illegible]	NA
33S	1E	[illegible]	C	2950	SE	D	G	N	M	C2 C12 E3 E25 E7		Z4	[illegible]	NA
33S	1E	[illegible]	D	2[illegible]40	SE	O	G	Y	H	A4 C1 C2 C5 C12 D1 D2 D5 E		Z4 Z9 Z15	FAR	NA
33S	1E	11	A	2140	SW	W	G	N	L	A9 C2 C3 C6 C9 C11 E3 E4 C E E22		Z4	FAR	NA
33S	1E	11	AA	2000	S	PE	G	Y	L	A12 C12 D2		Z3 Z16	NON	UP
33S	1E	11	B	2040	SW	A	F	N	[illegible]	A1 A2 A9 C1 C2 C3 C4 C6 C8	D4 E3 E4 E8 E23	Z1	FAR	NA
33S	1E	11	BB	1990	SE	W	G	N	[illegible]	A10 C15 E7		Z2 Z3 Z4 Z5 Z15 Z16 Z19	NON	DN
33S	1E	11	C	2[illegible]10	SE	PE	G	Y	L	A9 C3 C15 [illegible]		Z1	PFC	NA
33S	1E	11	CC	1940	S	PE	G	Y	H	A10 C2 C12 D1 D2 L2		Z3	FAR	NA
33S	1E	11	D	2150	SE	IW	G	Y	L	C12 C8 D6		Z1	FAR	NA
33S	1E	11	DD	1920	W	PE	G	Y	L	A10 C2 C10 D2 E3 F9		Z1	PFC	NA
33S	1E	11	E	2140	SE	PE	G	Y	L	A10 C12 D1 D5 D6 D7 E2 E9		Z15 Z16	FAR	UP
33S	1E	11	EE	2020	SE	ID	G	N	L	C12 E3 C8		Z15	FAR	NA
33S	1E	11	F	1930	SE	IW	G	Y	L	A9 C3 C15 D3 D9 D11 E3		Z1	PFC	NA
33S	1E	11	FF	1980	SE	PE	G	N	L	A10 C2 C12 D11 E3		Z1	FAR	NA
33S	1E	11	G	1980	E	PE	G	N	L	C12 E3 E4 E9 D9		Z4	FAR	NA
33S	1E	11	GG	1980	SE	PE	G	N	L	A10 A11 C2 C12	A11-IN PLACES	Z15 Z16 Z25	FAR	NA
33S	1E	11	H	2140	NE	IW	F	Y	L	B2 C12 D2 E3 E4 E6 E10 E15		Z4	FAR	NA
33S	1E	11	HH	2080	SE	PE	G	N	L	A10 C12-LATE		Z15 Z16 Z4	FAR	DN
33S	1E	11	J	2000	NE	IW	G	N	L	A10 B7 C12 E3 E9		Z4	FAR	UP
33S	1E	11	JJ	2280	SE	PE	G	N	L	A1 A11 B7-CASCADE C1 C8 D6		Z15 Z16	FAR	NA
33S	1E	11	K	2000	NE	IW	G	N	L	C7 C15 E3 E22 F9 A10		Z8	FAR	NA
33S	1E	11	KK	2550	S	IW	G	N	L	B2 C2 C8 C12		Z15 Z16	FAR	NA
33S	1E	11	L	2320	SE	IW	F	Y	L	C15 C8 D12 E3 A9 C3 A10 A3	D3 E4 E7	Z1	FAR	NA
33S	1E	11	LL	2490	SE	IW	G	N	L	A1 A8 A9 A7 B2 C1 C2 C3 C8	B6	Z9 Z16	FAR	DN
33S	1E	11	M	[illegible]340	NW	IW	G	N	L	C12 B2		Z2 Z3 Z4 Z8	NON	NA
33S	1E	11	MM	[illegible]330	SE	W	G	Y	L	A11 C12 D2 D9 A10-MODERA		Z1	[illegible]	NA
33S	1E	11	N	1360	W	W	G	N	L	A1 A7 A8 A9 A10 C1 C3 C4	C5 C8 C15 D4 D8 E4 E10	Z1	FAR	NA
33S	1E	11	NN	2400	S	PE	G	Y	H	A11 C2 C12 D1 D2 D5 D9 D11	A10	Z2 Z3 Z13	NON	NA
33S	1E	11	O	2040	W	W	G	N	L	A4 A10 B2 C3 C8 C1 E10		Z4	FAR	NA
33S	1E	11	OO	2370	SE	W	G	N	L	A9 B2 C1 C2 C8 C12		Z1	FAR	NA
33S	1E	11	P	[illegible]00	W	W	G	N	L	A10 B6 C2 C12 D2		Z8	FAR	NA
33S	1E	11	Q	[illegible]00	NW	A	G	Y	[illegible]	A9 A10 C1 C2 C3 C5 C9 E3 E		Z1	[illegible]	NA
33S	1E	11	[illegible]	[illegible]0	NW	W	G	N	[illegible]	C12 B2 C2		Z4 Z7	[illegible]	NA
33S	1E	11	[illegible]	[illegible]40	SE	[illegible]	G	[illegible]	[illegible]	A1 A6 A7 A8 A9 A11 B3 B4 C4 C12 D1 D4 D5 D6 D9		Z1	[illegible]	NA
33S	1E	11	[illegible]	[illegible]	SE	[illegible]	G	N	[illegible]	A1 C9 C12 D6 D6		Z3 Z7 Z10	[illegible]	NA
33S	1E	11	[illegible]	[illegible]	SE	PE	G	[illegible]	H	A1 A10 B2 B4 C6 C12 D1 D2	C5 D6 D9 E3 E19	[illegible]	[illegible]	[illegible]
33S	1E	11	[illegible]	[illegible]	E	[illegible]	[illegible]	N	[illegible]	[illegible] E19		[illegible]	[illegible]	[illegible]
33S	1E	11	W	[illegible]	S	[illegible]	G	[illegible]	H	A11 C2 C12 D2 L19 D1 D3		[illegible]	[illegible]	NA
33S	1E	11	[illegible]	[illegible]00	E	A	G	N	[illegible]	A9 A10 C2 C3 C9 C11 E3 E4	E8 E10 E22	[illegible]	[illegible]	NA
33S	1E	11	[illegible]	[illegible]90	SE	W	P	N	[illegible]	A1 A4 A5 A8 A9 A10 B2 C12 E E10		Z2 Z4 Z16 Z29	[illegible]	NA
33S	1E	[illegible]	[illegible]	[illegible]	S	A	G	[illegible]	[illegible]	A1 A10 C12 D2 D9 D4		[illegible]	[illegible]	[illegible]
33S	1E	12	A	[illegible]	W	A	G	[illegible]	M	B2 C12-LATE C2 D11		[illegible]	[illegible]	NA
33S	1E	12	B	[illegible]	NW	[illegible]	G	N	L	E19 C12		Z4	[illegible]	NA
33S	1E	12	C	[illegible]	NW	[illegible]	G	[illegible]	M	A9 C12 D2 D5 L6		Z4	[illegible]	NA
33S	1E	12	[illegible]	[illegible]	W	A	[illegible]	[illegible]	[illegible]	A1 A11 C1 C4 C8 C15 [illegible] D5 D9 A1		Z4	[illegible]	NA
33S	1E	12	[illegible]	[illegible]	S	A	[illegible]	N	M	A1 A4 A8 C8 C12 E4 D5 D9		Z4	[illegible]	NA
33S	1E	12	[illegible]	[illegible]	S	A	G	N	M	A4 A8 A11 C1 C7 C0 C8 C15 D7		Z4	[illegible]	NA
33S	1E	12	G	[illegible]	SE	A	G	N	[illegible]	A1 C9 C12 C15 A4		Z4	[illegible]	NA
33S	1E	[illegible]	[illegible]	[illegible]	SW	A	[illegible]	[illegible]	M	A5 A6 A11 C1 C3 C8 C15		Z4	[illegible]	NA
33S	1E	[illegible]	[illegible]	[illegible]	NW	A	G	[illegible]	[illegible]	A5 B0 C8 C12 D9		Z4	[illegible]	NA
33S	1E	[illegible]	[illegible]	[illegible]	NW	[illegible]	[illegible]	[illegible]	M	[illegible] D5 A		Z4	[illegible]	NA
33S	1E	[illegible]	[illegible]	[illegible]	[illegible]	A	[illegible]	[illegible]	[illegible]	[illegible]		Z4	[illegible]	NA
33S	1E	[illegible]	[illegible]	[illegible]	SE	[illegible]	[illegible]	[illegible]	[illegible]	[illegible] C8 C12 D2 D9 [illegible]		Z1 D1 A[illegible]	[illegible]	NA
33S	1E	[illegible]	[illegible]	[illegible]	SW	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]
33S	1E	[illegible]	[illegible]	[illegible]	SW	[illegible]	[illegible]	[illegible]	[illegible]	[illegible] C15 E9 D[illegible]		[illegible]	[illegible]	[illegible]
33S	1E	[illegible]	[illegible]	[illegible]	SL	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]
33S	1E	[illegible]	[illegible]	[illegible]	SW	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	SE	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NA	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]



335	2E	15 G	3530 NW	PE	G	N	L	[illegible] C4 E10 E19 E	Z4		
335	2E	15 N	3900 NW	[illegible]	G	[illegible]	H	[illegible]	Z4	[illegible]	NA
335	2E	17 A	[illegible] SE	[illegible]	G	N	M	[illegible]	Z4	[illegible]	NA
335	2E	17 B	[illegible] SE	[illegible]	G	[illegible]	L	[illegible]	Z4	[illegible]	NA
335	2E	17 C	[illegible] SE	[illegible]	G	[illegible]	M	[illegible]	Z4	[illegible]	NA
335	2E	17 [illegible]	[illegible] S	W	G	[illegible]	M	[illegible]	Z4	[illegible]	NA
335	2E	18 A	[illegible]	[illegible]	G	[illegible]	[illegible]	[illegible] D11	Z4	[illegible]	NA
335	2E	18 B	[illegible]	[illegible]	G	[illegible]	[illegible]	[illegible] A9 A3	Z4	[illegible]	NA
335	2E	18 C	[illegible] S	O	F	N	L	A9 [illegible] C15 C11 [illegible] E11	Z3 Z4 Z8	[illegible]	NA
335	2E	18 D	[illegible] SW	D	F	N	L	A3 A11 [illegible] C8 C15 D4	Z4	FAR	NA
335	2E	18 E	[illegible] S	D	G	[illegible]	L	C2 C8 [illegible] E11	Z4	FAR	NA
335	2E	19 F	[illegible] S	O	G	N	L	A8 A10 C1 [illegible] C8 C15 E3	Z4	FAR	NA
335	2E	18 G	2230 SW	D	G	N	L	A9 B2 [illegible] C15 C11 MIXED	Z4	FAR	NA
335	2E	19 A	1910 S	O	G	N	L	A9 C3 C8 C15	Z4	FAR	UP
335	2E	19 B	1900 S	O	G	Y	H	C12 D1 D3 D5 D9 C8 D11	Z4	FAR	NA
335	2E	19 C	1950 S	O	F	N	L	A4 A9 C3 C8 C11 E3 E9	Z4	FAR	NA
335	2E	21 A	2720 NW	IW	F	N	I	A7 A11 B7 B? C12 D6 D9	Z1	PFC	NA
335	2E	21 B	2400 NW	IO	G	N	L	A9 B2 C12	Z1	FAR	NA
335	2E	21 C	3000 W	PE	G	N	L	C13 D5	Z25	FAR	UP
335	2E	22 A	3770 NW	IW	G	N	L	A7 B2 C2 C? C11 LA1E D5 E2	Z4	FAR	UP
335	2E	23 B	1760 NE	O	F	Y	H	A2 A4 A9 B2 C2 C7 C8 C11 L D1 D5 E1 E3	Z4	FAR	NA
335	2E	22 C	3770 NW	D	F	N	L	A4 B2 C2 C3 C8 C11 E3	Z4 Z15	NON	NA
335	2E	23 D	3880 NW	IW	G	N	L	A9 A10 B2 B6 C2 C7 C10 L C1 E1 E3	Z3 Z4 Z15	FAR	UP
335	2E	23 E	3560 NW	O	G	Y	M	C1 C2 C3 C7 C8 C10-C11 D2 E3	Z4 Z15	FAR	NA
335	2E	23 F	3760 NW	O	G	Y	M	C2 C13 D2 E3 A10	Z4 Z15	FAR	NA
335	2E	23 G	4130 NW	O	G	N	I	A9 A10 B2 C2 C3 C7 C8 C10- E1 E3	Z3 Z4 Z16	FAR	UP
335	2E	24 A	4020 N	IW	G	Y	H	B6 C13 D1 D2 B2 D6 D12	Z4	PFC	NA
335	2E	26 A	4300 NW	IW	G	[illegible]	H	A9 A10 C1 C2 C3 C10 D1 D2 E3 C7 D5	Z4 Z7 Z7	FAR	NA
335	2E	27 A	2890 W	IW	G	N	L	C12 E3	Z1	FAR	NA
335	2E	27 B	3830 W	IW	G	N	L	B2 B3 C2 C7 C11 E3 E19 E22 A2	Z3 Z15	FAR	NA
335	2E	27 C	3630 NW	PE	G	N	L	A2 C2 C3 C7 C9 C11 E3 E4 E E22	Z4 Z11 Z15 Z16	FAR	NA
335	2E	27 D	3620 NW	W	G	N	L	A9 B2 C2 C7 C12 E3 E9 E10 E	Z4	FAR	NA
335	2E	27 E	3500 NW	W	F	N	L	A7 A9 B2 C1 C2 C3 C10 D1 E E9 C8	Z4	NON	NA
335	2E	27 F	3420 NW	W	G	N	L	B3 C2 C8 C13 E3 E7 E9	Z4	FAR	NA
335	2E	27 G	3480 NW	W	F	N	L	B2 C2 C8 C10 D1 D2 E1 E3 E E10	Z4	FAR	UP
335	2E	29 A	2740 W	PE	G	N	L	A11 C2 C3 C7 C11	Z1	FAR	UP
335	2E	29 B	2400 W	PE	G	N	L	B7 C13 D5 D6 Z1		FAR	UP
335	2E	29 C	2290 W	PE	G	N	L	B2 C12 E1 B6		PFC	NA
335	2E	29 D	2190 N	PE	G	Y	H	B1 C12 D1 D2 D5 D6 E3	Z1	FAR	UP
335	2E	29 E	1470 W	PE	G	N	L	A10 A11 C2 C7 C12 D11 E3 F	Z4	FAR	NA
335	2E	29 F	1490 W	PE	G	[illegible]	[illegible]	A10 C2 C7 C12 D? D11 E3 E1	Z4	FAR	NA
335	2E	31 A	[illegible] N	PE	F	[illegible]	[illegible]	A4 A5 A10 B2 B6 C2 C3 C11 D5 D9 D12 E3 E4	Z4	FAR	NA
335	2E	31 B	[illegible] N	PE	G	[illegible]	H	A10 B2 B6 C2 C? C7 C11 D1 D6 D10 E3	Z22	FAR	UP
335	2E	31 C	[illegible] W	W	F	N	[illegible]	A5 A6 A8 A10 B6 C2 C12 D8 E3 E19	Z1	FAR	UP
335	2E	31 D	2760 NW	PE	G	N	I	A15 C2 C3 C11 D2	Z1	FAR	UP
335	2E	31 E	2560 NW	PE	G	N	L	C14 E3	Z1	FAR	UP
335	2E	33 A	2440 SW	[illegible]	F	N	L	A4 A10 B2 [illegible] C15 E1 E3	Z4	PFC	NA
335	2E	33 B	2760 W	E	G	[illegible]	M	A10 C2 C7 C12 E1 E15	Z4	FAR	NA
335	2E	33 C	3320 NW	PE	F	N	L	A1 A10 B2 C2 C12 E18 E19 E	Z4	FAR	NA
335	2E	35 A	4590 SW	PE	F	N	L	A2 A9 A10 B6 C2 C11 E1 E11 E25	Z4 Z14	FAR	NA
335	2E	35 B	4450 SE	W	G	N	L	A9 A10 B2 C2 C1 C10 C11 13	Z4	NON	DN
335	2E	35 C	4140 SE	W	F	N	L	A1 A3 A10 B2 C2 C12 E3	Z4	FAR	NA
335	3E	7 A	2240 NE	PE	G	Y	H	A11 C12 D1 D2 D3 D5 D6 D7	Z1 Z4	FAR	NA
335	3E	7 B	2570 NW	IW	F	N	H	A4 A9 B3 C12 E4B + D1 D6	Z4	PFC	NA
335	3E	7 C	2660 NW	IW	G	N	L	A1 A4 B2 C3 C4 C9 E10 C12-MIXED E20-OLD	Z4	FAR	NA
335	3E	10 A	2980 NW	IW	G	N	H	A7 A8 A9 A11 B2 B7 C1 C2 C3 C7 C8 C10 D1 D5 D6 E1 E3	Z2 Z4	FAR	NA
335	3E	10 B	3100 NE	IW	F	Y	H	A3 B2 B6 C2-P+T C1 C2 D6 C	Z4	NON	NA
335	3E	10 C	3300 NE	IW	G	N	H	A11 B7 C13 D1 D5 D8	Z4	PFC	NA
335	3E	10 D	3230 N	PE	G	Y	L	A9 C2 C7 RIPC11 UPC12 E3	Z4 Z15 Z16	PFC	NA
335	3E	10 E	3320 NE	IW	G	N	M	A9 C7 C12 D6	Z4	FAR	UP
335	3E	10 F	3420 NE	IW	G	N	L	A4 B6 C12 D8 E3	Z4	PFC	NA
335	3E	10 G	3450 NE	PE	F	N	L	A9 B6 C7 C12 D12 E3 E19 D6	Z4	FAR	NA
335	3E	18 A	3320 NE	IW	G	N	M	A9 C7 C12 D6	Z4	FAR	NA
335	3E	18 B	3230 N	PE	G	Y	L	A9 C2 C7 RIPC11 UPC12 E3	Z4 Z15 Z16	PFC	NA
335	3E	19 C	4110 N	PE	G	Y	H	C2 C13 D2 D3 E3 E10 E23	Z4	FAR	UP
335	3E	19 D	4150 NW	PE	F	Y	H	A4 B6 C2 C13 D2	Z4	PFC	NA
335	3E	19 E	3850 N	PE	G	N	H	C1 C2 C7 L-C10 R-C13 D1 D2 E1 E3	Z4 Z8	PFC	NA
335	3E	19 F	[illegible] N	IW	F	[illegible]	H	A4 C2 C4 C9 C12 C14 D1 D2 [illegible] D12	Z4 Z13	FAR	UP
335	3E	19 G	2760 NE	PE	G	N	L	A8 C3 C5 C7 C10 D8	Z3 Z4	FAR	NA
335	3E	19 J	2450 NE	PE	F	N	L	A3 B6 C7 C12 D12 E3 E19 D6	Z4	FAR	DN
335	3E	19 K	3540 NE	PE	G	N	L	B2 B6 C7 C13 D2 D8 D12	Z4 Z9	FAR	NA
335	3E	25 A	4180 SE	O	G	N	L	[illegible]	Z4	PFC	NA
335	3E	28 A	3280 E	IW	G	[illegible]	H	C2 C13 D1 D2 D5 E3	Z4	PFC	NA
335	3E	28 A	3560 E	O	G	[illegible]	H		Z4	PFC	NA
335	3E	29 B	3420 E	O	G	[illegible]	H	A9 C2 C3 C7 C11 E3	Z4	FAR	UP
335	3E	29 C	[illegible] N	W	F	[illegible]	H	A3 A10 B2 D6 C13 E4 E10 E19	Z4	FAR	UP
335	3E	29 D	[illegible] NE	PE	F	[illegible]	H	A? A3 A10 B6 C2 C12 D12 E4 E10 E23	Z15	[illegible]	[illegible]
335	3E	29 E	[illegible] NE	[illegible]	G	[illegible]	H	A10 B6 C2 C10 D1 D6 D12 E10 E3 E23	Z4	[illegible]	NA
335	3E	29 F	[illegible] NE	[illegible]	[illegible]	[illegible]	H	A10 B6 C2 C11 D1 E23 E10 D8 D12	Z4	[illegible]	[illegible]
335	3E	29 J	[illegible] NE	PE	[illegible]	[illegible]	[illegible]	A? A3 A4 B2 B6 C2 C12 D2 D E25	Z4	[illegible]	[illegible]
335	3E	29 K	[illegible] NE	[illegible]	F	[illegible]	M	A? B2 B6 C2 C1 C12 D2 D12 E25-OLD	Z4	PFC	NA
335	3E	29 L	[illegible] E	PE	F	[illegible]	M	A1 B2 C2 C3 C7 C12 D2 D4 D E1-F E3	Z4	PFC	NA
335	3E	30 A	3290 S	PE	G	[illegible]	[illegible]	[illegible] C2 C11 C1 C2 E19 B2 D12	Z4	[illegible]	[illegible]
335	3E	31 A	4040 E	W	G	Y	[illegible]	[illegible] A10 C7 E19	Z4	PFC	[illegible]
335	3E	31 B	[illegible] NE	PE	F	N		A3 A10 C2 C12 D4 E3	Z4	[illegible]	[illegible]
335	3E	31 C	4250 S	IW	F	Y	[illegible]	A2 A10 B2 C2 C10 E2 E10 E2	Z4	[illegible]	NA
335	3E	31 D	4160 E	PE	G	[illegible]		A1 A8 A9 A10 C2 C7 C12 D4 E9	Z3 Z4	[illegible]	NA
335	3E	31 E	4190 E	W	G	N	M	A4 A10 C2 C4 C12 E19 E25	Z4	[illegible]	NA
335	3E	31 F	3940 NE	W	G	[illegible]	M	[illegible] C12 APL + D2 E19 A10	Z4	[illegible]	NA
335	3E	31 G	4000 NW	W	F	[illegible]	[illegible]	[illegible] A4 A10 [illegible] D1 [illegible] E12	Z4	[illegible]	NA
335	3E	31 H	[illegible] E	[illegible]	F	N	[illegible]	A5 A4 A10 B2 C2 C3 C4 C7 C [illegible] E9 E12	Z4	[illegible]	NA
335	3E	31 J	[illegible] E	W	G	N		[illegible] B2 [illegible] E9 [illegible] E26	Z4	[illegible]	NA
335	3E	31 K	[illegible] SE	[illegible]	F	N	[illegible]	A4 A6 A9 [illegible] F3 E10 E19 E25	Z3 Z4	[illegible]	NA
335	3E	31 [illegible]	[illegible] E	W	F	N		[illegible]	Z4	[illegible]	[illegible]
335	3E	31 M	[illegible] SE	W	[illegible]	N	M	[illegible]	Z4	[illegible]	NA
335	3E	31 N	[illegible] NE	[illegible]	[illegible]	[illegible]	M	[illegible] E10 E1	Z4	[illegible]	NA
335	3E	31 O	[illegible] S	[illegible]	[illegible]	[illegible]	M	[illegible] E19	Z4	[illegible]	[illegible]
335	3E	32 A	[illegible] SE	PE	[illegible]	[illegible]		[illegible]	Z4	[illegible]	[illegible]
335	3E	32 B	[illegible] E	W	G			[illegible]	Z4	[illegible]	[illegible]

34S	3E	5 G	3670 E	PE	G	N	L	A8,A9,A10,C2,C3,C7,C11,E3,E11,	21	FAR	UP
34S	3E	5 H	3660 E	PE	G	N		C2,C12,E3	21	PFC	NA
34S	3E	5 J	3900 SE	PE	G	N					NA
34S	3E	6 A	4180 SE	IW	G	N		B7,C2,C7,C10,E1,E3,E9,E11,	21	FAR	UP
34S	3E	6 B	3840 SE	IW	G	N	L	B2,B6,C12,E11,E19--	21	PFC	NA
34S	3E	6 C	3950 SE	PE	G	N		A1,C13,D11,E19,C7	21	PFC	NA
34S	3E	6 D	3300 E	IW	G	N		C2,D12,E11,E23,	21	PFC	NA
34S	3E	7 A	4000 E	IW	G	N	L	A4,A10,B6,C1,C2,C3,C10,E1,E11	21	FAR	NA
34S	3E	7 B	3800 E	IW	G	N	L	A2,A3,A4,C2,C11,E6,E10,		FAR	UP
34S	3E	7 C	3940 E	ID	P	N	L	A2,A3,A4,B2,C2,C3,E10,	21	FAR	UP
34S	3E	7 D	4070 SE	ID	G	N	L	A9,C2,E10,	21	FAR	NA
34S	3E	7 E	4080 NE	IW	G	N		A2,C2,C11,E6,E10,E11,		FAR	UP
34S	3E	7 F	3860 NE	PE	G	N	L	C2,C12,E10,	225	PFC	NA
34S	3E	7 G	3860 S	PE	G	N	L	C2,C12,E10,	21	PFC	NA
34S	3E	7 H	3900 NE	ID	G	N	L	A2,C2,C12,E10,	21	FAR	UP
34S	3E	7 J	4080 E	ID	G	N	L	A8,A9,C2,C7,C12,E3,E10,	21	FAR	UP
34S	3E	7 K	3960 E	ID	G	N	L	A9,C2,C3,C7,C10,E11,	21	FAR	UP
34S	3E	7 L	4080 NE	ID	G	N	L	C2,C7,C12,D6,E10,E11,E19,	21	FAR	UP
34S	3E	8 A	3540 S	IW	G	N	L	A9,C1,C15,D8,E11,E19,E21,		PFC	NA
34S	3E	9 A	3740 SE	PE	G	N	L	A10,C1,C11,E11,D8,D12,E2,C3,A9,E15,		FAR	UP
34S	3E	9 B	3140 E	ID	P	N	L			FAR	NA
34S	3E	9 C	3080 NE	PE	F	N	L	A1,A2,A9,A10,A8,C1,C2,C3,C6,C10,E1,E11,E19	23,25,Z13,Z14	NON	NA
34S	3E	12 A	3580 W	PE	F	N	L	A4,C1,C2,C3,C7,C11,E10,E11,E19,	225,	FAR	NA
34S	3E	12 B	3360 W	PE	G	N	L	C2,C3,C7,C11,E3,E10,E19,	225,	FAR	UP
34S	3E	15 A	3240 NE	IW	P	N	L	A1,A3,A4,A7,A8,A9,A10,B3,C1 ,C3,C4,C9,C10,C11,D4,E11,E13,E	23,23,Z4,Z5,Z8,Z14,Z20	NON	DN
											NA

...ropes Functioning Condition reaches in ... Creek WAU

TWNSH	RANGE	SECTIO	REAC	ELEV	ASPEC	CATEGO	CHNL_STA	SLUMP_PRE	SLUMP_PO	RATING	TREND_FAR
32S	1E	35	A	3120	SW	IW	G	Y	M	PFC	NA
32S	1E	35	D	3020	SE	ID	G	Y	M	PFC	NA
32S	3E	8	A	2740	S	ID	G	Y	M	PFC	NA
32S	3E	18	A	3960	NE	PE	G	Y	M	PFC	NA
32S	3E	18	B	3880	E	PE	F	Y	H	PFC	NA
32S	3E	18	C	3920	E	PE	G	Y	M	PFC	NA
32S	3E	19	D	3300	E	PE	G	Y	H	PFC	NA
33S	1E	1	A	2620	NW	ID	G	Y	H	PFC	NA
33S	1E	1	C	2620	W	IW	G	N	L	PFC	NA
33S	1E	1	F	2500	S	IW	G	N	H	PFC	NA
33S	1E	1	G	2550	SW	ID	G	N	L	PFC	NA
33S	1E	1	K	2470	N	IW	G	Y	H	PFC	NA
33S	1E	1	L	2400	N	IW	G	Y	H	PFC	NA
33S	1E	1	M	2720	SE	ID	F	Y	M	PFC	NA
33S	1E	1	N	2420	S	ID	G	Y	M	PFC	NA
33S	1E	1	O	2380	NE	WL	G	Y	L	PFC	NA
33S	1E	1	Q	2520	SW	IW	G	Y	H	PFC	NA
33S	1E	11	BB	1980	SE	IW	G	N	L	PFC	NA
33S	1E	11	D	2150	SE	IW	G	Y	L	PFC	NA
33S	1E	11	EE	2020	SE	ID	G	N	L	PFC	NA
33S	1E	11	M	1940	NW	IW	G	N	L	PFC	NA
33S	1E	11	P	1900	W	IW	G	N	L	PFC	NA
33S	1E	11	V	2040	E	ID	G	N	L	PFC	NA
33S	1E	12	A	2360	W	IW	G	Y	M	PFC	NA
33S	1E	27	L	1740	SE	IW	G	Y	H	PFC	NA
33S	1E	27	M	1950	E	IW	G	Y	L	PFC	NA
33S	1E	27	Q	2150	SW	ID	G	N	L	PFC	NA
33S	1E	27	R	2160	E	IW	G	N	L	PFC	NA
33S	1E	27	S	2420	S	IW	F	Y	H	PFC	NA
33S	2E	1	A	2420	S	WG	G	N	L	PFC	NA
33S	2E	3	F	441	SE	PE	G	N	L	PFC	NA
33S	2E	9	B	2930	S	ID	G	Y	H	PFC	NA
33S	2E	4	C	3080	S	PE	G	Y	M	PFC	NA
33S	2E	5	A	3610	SW	PE	F	N	M	PFC	NA
33S	2E	5	F	3320	SW	PE	G	Y	H	PFC	NA
33S	2E	5	J	3150	SW	PE	F	N	M	PFC	NA
33S	2E	5	K	2970	SW	PE	G	N	L	PFC	NA
33S	2E	5	N	3500	S	ID	G	N	M	PFC	NA
33S	2E	5	P	3250	SE	PE	P	Y	H	PFC	NA
33S	2E	5	R	3050	S	ID	G	N	M	PFC	NA
33S	2E	5	S	3230	SE	PE	F	Y	M	PFC	NA
33S	2E	6	A	2740	W	ID	G	Y	H	PFC	NA
33S	2E	12	A	2200	N	PE	G	Y	H	PFC	NA
33S	2E	13	A	2830	NE	IW	G	Y	H	PFC	NA
33S	2E	13	D	2570	N	PE	G	Y	H	PFC	NA
33S	2E	15	E	3200	NW	ID	F	Y	H	PFC	NA
33S	2E	15	F	3440	NW	PE	G	Y	M	PFC	NA
33S	2E	15	N	2900	NW	ID	G	Y	H	PFC	NA
33S	2E	17	C	2400	SE	ID	G	N	M	PFC	NA
33S	2E	17	D	2200	S	IW	G	N	M	PFC	NA
33S	2E	21	A	2720	NW	IW	F	N	L	PFC	NA
33S	2E	24	A	4020	N	IW	G	Y	H	PFC	NA
33S	2E	29	B	2400	W	PE	G	N	L	PFC	NA
33S	2E	31	E	2560	NW	PE	G	N	L	PFC	NA
33S	3E	7	A	2240	NE	PE	G	Y	H	PFC	NA
33S	3E	18	B	3180	NE	IW	F	Y	H	PFC	NA
33S	3E	18	C	3300	NE	IW	G	N	H	PFC	NA
33S	3E	18	E	3320	NE	IW	G	N	M	PFC	NA
33S	3E	19	A	3320	NE	IW	G	N	M	PFC	NA
33S	3E	19	C	4110	N	PE	G	Y	H	PFC	NA
33S	3E	19	D	4150	NW	PE	F	Y	H	PFC	NA
33S	3E	19	K	3580	NE	PE	G	N	L	PFC	NA
33S	3E	25	A	4380	SE	ID	G	N	L	PFC	NA
33S	3E	28	A	3280	E	IW	G	Y	H	PFC	NA
33S	3E	29	J	3750	NE	PE	P	Y	L	PFC	NA
33S	3E	29	K	3680	NE	PE	F	Y	M	PFC	NA
33S	3E	30	A	3280	S	PE	G	Y	H	PFC	UP
33S	3E	32	B	3640	E	IW	G	N	L	PFC	NA
34S	2E	6	A	3400	NW	PE	G	N	L	PFC	NA
34S	2E	5	B	3760	NE	PE	G	N	L	PFC	NA
34S	3E	5	C	3870	E	IW	G	N	L	PFC	NA
34S	3E	5	F	4080	NE	PE	G	N	L	PFC	NA
34S	3E	5	H	4020	E	PE	G	N	L	PFC	NA
34S	3E	6	B	4040	SE	IW	F	N	L	PFC	NA
34S	3E	6	C	4040	SE	PE	G	N	L	PFC	NA
34S	3E	6	D	4080	E	IW	G	N	L	PFC	NA
34S	3E	7	A	4080	NE	PE	G	N	L	PFC	NA
34S	3E	7	G	4040	S	PE	G	N	L	PFC	NA
34S	3E	8	A	3840	S	IW	G	N	L	PFC	NA

Functional at risk reaches in Lost Creek W/S

TWNSH	RANGE	SECTIO	REAC	ELEV	ASPEC	CATEGOR	CHNL_STA	SLUMP_PRE	SLUMP_PO	RATING	TREND_FAR
32S	1E	35	F	2940	E	ID	F	N	L	FAR	DN
33S	1E	11	H	2140	NE	IW	F	Y	L	FAR	DN
33S	1E	11	L	2020	SE	IW	F	Y	L	FAR	DN
33S	1E	12	E	2120	S	IW	G	N	M	FAR	DN
33S	1E	13	B	2100	SE	ID	F	N	L	FAR	DN
33S	1E	15	G	2220	SE	IW	F	Y	H	FAR	DN
33S	1E	15	L	2050	NE	PE	F	N	M	FAR	DN
33S	1E	15	O	2170	NE	ID	F	Y	H	FAR	DN
33S	1E	27	C	1740	SE	IW	F	Y	L	FAR	DN
33S	2E	5	B	3600	SW	PE	F	N	M	FAR	DN
33S	2E	7	H	2560	S	PE	F	Y	M	FAR	DN
33S	3E	19	G	3750	NE	PE	G	N	L	FAR	DN
32S	1E	35	B	2980	SW	IW	G	Y	M	FAR	NA
32S	1E	35	E	2860	S	PE	G	Y	M	FAR	NA
32S	1E	35	G	2840	SE	ID	G	N	L	FAR	NA
32S	2E	33	A	3600	SE	ID	F	N	L	FAR	NA
32S	2E	33	B	3590	NE	PE	G	N	L	FAR	NA
32S	2E	33	D	3380	SE	PE	G	N	L	FAR	NA
32S	2E	33	E	3500	SE	PE	G	N	L	FAR	NA
32S	2E	33	F	3390	E	PE	G	N	L	FAR	NA
32S	2E	33	H	3370	E	PE	F	N	L	FAR	NA
32S	2E	33	J	3530	S	PE	G	N	L	FAR	NA
32S	2E	33	K	3580	E	PE	G	Y	M	FAR	NA
32S	3E	19	A	3320	E	PE	F	Y	H	FAR	NA
32S	3E	19	C	2980	NE	ID	F	Y	H	FAR	NA
33S	1E	1	B	2500	SW	IW	G	Y	M	FAR	NA
33S	1E	1	D	2420	SW	IW	G	N	M	FAR	NA
33S	1E	1	E	2540	SW	IW	F	Y	M	FAR	NA
33S	1E	1	H	2630	SE	IW	P	Y	H	FAR	NA
33S	1E	1	P	2400	SW	IW	G	Y	M	FAR	NA
33S	1E	1	S	2700	SE	ID	F	Y	M	FAR	NA
33S	1E	3	A	3060	SE	ID	G	Y	M	FAR	NA
33S	1E	3	B	2960	E	ID	G	N	M	FAR	NA
33S	1E	3	C	2960	SE	ID	G	N	M	FAR	NA
33S	1E	3	D	2960	SE	ID	G	Y	H	FAR	NA
33S	1E	11	AA	2000	S	PE	G	Y	L	FAR	NA
33S	1E	11	C	2010	SE	PE	G	Y	L	FAR	NA
33S	1E	11	CC	1940	S	PE	G	Y	H	FAR	NA
33S	1E	11	E	2140	SE	PE	G	Y	L	FAR	NA
33S	1E	11	F	1930	SE	IW	G	Y	L	FAR	NA
33S	1E	11	FF	1880	SE	PE	G	N	L	FAR	NA
33S	1E	11	G	1980	E	PE	G	N	L	FAR	NA
33S	1E	11	GG	1960	SE	PE	G	N	L	FAR	NA
33S	1E	11	J	2000	NE	IW	G	N	L	FAR	NA
33S	1E	11	JJ	2260	SE	PE	G	N	L	FAR	NA
33S	1E	11	K	2000	NE	IW	G	N	L	FAR	NA
33S	1E	11	KK	2550	S	IW	G	N	L	FAR	NA
33S	1E	11	MM	2300	SE	IW	G	Y	L	FAR	NA
33S	1E	11	NN	2400	S	PE	G	Y	L	FAR	NA
33S	1E	11	O	2040	W	IW	G	N	L	FAR	NA
33S	1E	11	OO	2070	SE	IW	G	N	L	FAR	NA
33S	1E	11	Q	2000	NW	IW	G	Y	L	FAR	NA
33S	1E	11	R	2000	NW	IW	G	N	L	FAR	NA
33S	1E	11	W	2150	S	PE	G	Y	L	FAR	NA
33S	1E	11	Z	2170	S	IW	G	Y	L	FAR	NA
33S	1E	12	B	2180	NW	ID	G	N	L	FAR	NA

Functional at risk reaches in Lost Creek WA

33S	1E	12 C	2080	NW	ID	G	Y	M	FAR	NA
33S	1E	12 D	2300	W	IW	G	Y	H	FAR	NA
33S	1E	12 F	2130	S	IW	G	N	M	FAR	NA
33S	1E	12 G	2100	SE	IW	G	N	L	FAR	NA
33S	1E	12 H	2060	SW	IW	G	N	M	FAR	NA
33S	1E	12 K	2160	NW	ID	G	Y	M	FAR	NA
33S	1E	12 L	2270	SW	IW	F	Y	L	FAR	NA
33S	1E	12 M	2130	SE	ID	G	N	L	FAR	NA
33S	1E	12 N	2110	SW	ID	G	N	L	FAR	NA
33S	1E	12 O	2060	SW	ID	G	N	L	FAR	NA
33S	1E	13 A	2060	SW	ID	G	N	L	FAR	NA
33S	1E	13 C	2080	SE	ID	F	N	L	FAR	NA
33S	1E	13 D	2030	SW	ID	G	N	L	FAR	NA
33S	1E	13 G	2140	S	IW	F	N	L	FAR	NA
33S	1E	13 J	1900	S	ID	G	N	L	FAR	NA
33S	1E	13 K	1880	S	ID	G	Y	M	FAR	NA
33S	1E	14 A	1900	SE	ID	G	N	L	FAR	NA
33S	1E	14 B	1940	E	IW	G	N	L	FAR	NA
33S	1E	14 C	2010	E	PE	G	N	L	FAR	NA
33S	1E	14 D	1940	E	IW	G	N	L	FAR	NA
33S	1E	14 F	1930	E	IW	G	N	L	FAR	NA
33S	1E	14 G	1930	S	IW	G	N	L	FAR	NA
33S	1E	15 A	2770	SE	ID	P	Y	H	FAR	NA
33S	1E	15 B	2580	S	IW	G	N	L	FAR	NA
33S	1E	15 C	2360	S	IW	P	Y	H	FAR	NA
33S	1E	15 E	2470	S	IW	G	N	L	FAR	NA
33S	1E	15 F	2400	SE	IW	G	Y	H	FAR	NA
33S	1E	15 H	2280	SE	IW	G	N	L	FAR	NA
33S	1E	15 J	2150	SE	IW	F	N	L	FAR	NA
33S	1E	15 K	2050	SE	IW	G	N	L	FAR	NA
33S	1E	15 Q	2660	SE	ID	G	Y	H	FAR	NA
33S	1E	15 R	2010	E	PE	G	N	L	FAR	NA
33S	1E	22 C	1950	SW	IW	F	Y	H	FAR	NA
33S	1E	23 A	1920	S	IW	G	N	L	FAR	NA
33S	1E	23 B	1980	E	IW	F	N	L	FAR	NA
33S	1E	23 C	2060	E	IW	G	Y	H	FAR	NA
33S	1E	23 E	1900	SE	IW	G	N	L	FAR	NA
33S	1E	23 F	1960	SE	ID	G	N	L	FAR	NA
33S	1E	27 A	1760	SE	IW	G	Y	H	FAR	NA
33S	1E	27 B	1720	SE	IW	G	Y	H	FAR	NA
33S	1E	27 BB	2100	SE	IW	F	N	L	FAR	NA
33S	1E	27 DD	2450	E	IW	G	N	L	FAR	NA
33S	1E	27 E	1900	SE	IW	G	Y	H	FAR	NA
33S	1E	27 F	1710	SE	IW	G	N	L	FAR	NA
33S	1E	27 G	1600	S	IW	G	N	L	FAR	NA
33S	1E	27 H	1680	SE	IW	G	N	L	FAR	NA
33S	1E	27 N	1880	E	IW	G	Y	H	FAR	NA
33S	1E	27 P	2020	SE	IW	G	Y	H	FAR	NA
33S	1E	27 T	2400	E	IW	G	N	L	FAR	NA
33S	1E	27 U	2120	S	IW	G	Y	L	FAR	NA
33S	1E	27 W	1860	SW	IW	G	N	L	FAR	NA
33S	1E	27 X	1900	SW	IW	G	N	L	FAR	NA
33S	1E	27 Y	1800	SE	PE	G	Y	H	FAR	NA
33S	1E	28 A	2140	S	IW	G	N	L	FAR	NA
33S	1E	28 C	2000	SE	IW	G	N	L	FAR	NA
33S	1E	28 D	2040	S	IW	G	N	L	FAR	NA
33S	1E	35 A	1940	N	ML	F	N	L	FAR	NA

Functional at risk reaches in Lost Creek WA

33S	1E	35	B	[illegible]	W	PE	G	N	L	FAR	NA
33S	1E	35	C	[illegible]	NW	PE	F	N	L	FAR	NA
33S	2E	3	A	[illegible]	SE	ID	F	N	L	FAR	NA
33S	2E	3	B	2650	SE	PE	G	N	L	FAR	NA
33S	2E	3	C	2640	SE	IW	F	N	L	FAR	NA
33S	2E	3	D	2690	E	ID	G	N	L	FAR	NA
33S	2E	3	E	2500	S	ID	G	N	L	FAR	NA
33S	2E	9	A	3860	E	ID	G	N	L	FAR	NA
33S	2E	4	B	3250	S	ID	F	N	H	FAR	NA
33S	2E	4	F	3700	E	ID	F	N	L	FAR	NA
33S	2E	5	C	3420	SW	PE	G	N	M	FAR	NA
33S	2E	5	D	3600	W	ID	G	N	M	FAR	NA
33S	2E	5	E	3580	S	ID	G	N	H	FAR	NA
33S	2E	5	H	2950	S	PE	G	N	L	FAR	NA
33S	2E	5	M	3860	E	ID	G	N	L	FAR	NA
33S	2E	5	O	3380	S	ID	G	N	M	FAR	NA
33S	2E	5	Q	3460	SE	IW	P	Y	H	FAR	NA
33S	2E	5	W	3900	E	PE	G	N	L	FAR	NA
33S	2E	6	B	2730	SW	ID	G	Y	M	FAR	NA
33S	2E	6	C	2680	SE	ID	G	N	L	FAR	NA
33S	2E	6	D	2700	SE	ID	F	Y	M	FAR	NA
33S	2E	6	E	2600	SW	ID	G	N	L	FAR	NA
33S	2E	6	F	2520	SW	ID	G	Y	L	FAR	NA
33S	2E	6	G	2660	SW	ID	G	N	L	FAR	NA
33S	2E	7	A	2380	NW	ID	G	N	L	FAR	NA
33S	2E	7	B	2440	SE	ID	G	Y	L	FAR	NA
33S	2E	7	C	2440	S	ID	G	N	L	FAR	NA
33S	2E	7	E	2230	S	ID	F	N	L	FAR	NA
33S	2E	7	F	2310	SW	ID	G	Y	M	FAR	NA
33S	2E	7	G	2440	S	ID	G	Y	M	FAR	NA
33S	2E	7	J	2480	S	ID	G	Y	L	FAR	NA
33S	2E	7	K	2290	S	ID	G	Y	L	FAR	NA
33S	2E	7	Y	2520	SW	ID	G	Y	L	FAR	NA
33S	2E	11	D	2240	N	IW	F	Y	H	FAR	NA
33S	2E	13	F	2250	S	ID	F	N	L	FAR	NA
33S	2E	13	F	3080	NW	IW	G	N	H	FAR	NA
33S	2E	13	G	3040	NW	ID	G	N	H	FAR	NA
33S	2E	15	G	3530	NW	PE	G	N	L	FAR	NA
33S	2E	17	A	2160	SE	ID	G	N	M	FAR	NA
33S	2E	17	B	2320	SE	ID	G	N	L	FAR	NA
33S	2E	18	A	1900	S	ID	G	Y	H	FAR	NA
33S	2E	18	B	2020	S	ID	G	N	L	FAR	NA
33S	2E	18	C	2230	S	ID	F	N	L	FAR	NA
33S	2E	18	D	2270	SW	ID	F	N	L	FAR	NA
33S	2E	18	E	2200	S	ID	G	Y	L	FAR	NA
33S	2E	18	F	2250	S	ID	G	N	L	FAR	NA
33S	2E	19	A	1910	S	ID	G	N	L	FAR	NA
33S	2E	19	B	1900	S	ID	G	Y	H	FAR	NA
33S	2E	19	C	1950	S	ID	F	N	L	FAR	NA
33S	2E	23	A	3770	NW	IW	G	N	L	FAR	NA
33S	2E	23	B	3760	NE	ID	F	Y	H	FAR	NA
33S	2E	23	E	3660	NW	ID	G	Y	M	FAR	NA
33S	2E	23	F	3760	NW	ID	G	Y	M	FAR	NA
33S	2E	26	A	4300	NW	IW	G	Y	H	FAR	NA
33S	2E	27	A	3910	W	IW	G	N	L	FAR	NA
33S	2E	27	B	3940	W	IW	G	N	L	FAR	NA
33S	2E	27	C	3980	NW	PE	G	N	L	FAR	NA

Functional at risk reaches in Lost Creek WA...

33S	2E	27	D	[illegible]	NW	IW	G	N	L	FAR	NA
33S	2E	29	D	2290	N	PE	G	Y	H	FAR	NA
33S	2E	29	E	2470	W	PE	G	N	L	FAR	NA
33S	2E	29	F	2680	W	PE	G	Y	L	FAR	NA
33S	2E	33	A	3440	SW	ID	F	N	L	FAR	NA
33S	2E	33	B	3260	W	PE	G	Y	M	FAR	NA
33S	2E	33	C	3320	NW	PE	F	N	L	FAR	NA
33S	2E	35	B	4450	SE	IW	G	N	L	FAR	NA
33S	2E	35	C	4140	SE	IW	F	N	L	FAR	NA
33S	3E	7	B	2570	NW	IW	F	N	H	FAR	NA
33S	3E	7	C	2660	NW	IW	G	N	L	FAR	NA
33S	3E	18	F	3420	NE	IW	G	N	L	FAR	NA
33S	3E	18	G	3450	NE	PE	F	N	L	FAR	NA
33S	3E	19	F	0	N	IW	F	Y	H	FAR	NA
33S	3E	19	J	3450	NE	PE	F	N	L	FAR	NA
33S	3E	29	D	3800	NE	PE	F	Y	H	FAR	NA
33S	3E	31	B	4270	NE	PE	F	N	L	FAR	NA
33S	3E	31	C	4250	S	IW	F	N	L	FAR	NA
33S	3E	31	D	4160	E	PE	G	Y	L	FAR	NA
33S	3E	31	E	4100	E	IW	G	N	M	FAR	NA
33S	3E	31	F	3840	NE	IW	G	Y	M	FAR	NA
33S	3E	31	G	4020	NW	IW	F	Y	H	FAR	NA
33S	3E	31	H	4260	E	ID	F	N	L	FAR	NA
33S	3E	31	J	4300	E	IW	G	N	L	FAR	NA
33S	3E	31	K	4200	SE	ID	F	N	L	FAR	NA
33S	3E	31	M	3900	SE	IW	F	N	M	FAR	NA
33S	3E	31	N	3810	NE	PE	G	Y	M	FAR	NA
33S	3E	31	O	3790	S	ID	G	N	M	FAR	NA
34S	2E	5	C	2900	N	IW	F	N	L	FAR	NA
34S	3E	2	C	3240	N	ID	G	N	L	FAR	NA
34S	3E	3	A	3100	W	WG		N	L	FAR	NA
34S	3E	3	B	3100	W	PE	F	N	L	FAR	NA
34S	3E	3	D	3060	E	PE	G	N	L	FAR	NA
34S	3E	3	F	3100	N	PE	G	N	L	FAR	NA
34S	3E	3	G	3120	NW	PE	G	N	L	FAR	NA
34S	3E	5	B	3680	NW	PE	F	N	L	FAR	NA
34S	3E	7	A	4000	E	IW	G	N	L	FAR	NA
34S	3E	7	D	4020	SE	ID	G	N	L	FAR	NA
34S	3E	9	B	3140	E	ID	P	N	L	FAR	NA
34S	3E	12	A	3580	W	PE	F	N	L	FAR	NA
33S	1E	1	R	2200	SE	PE	G	Y	M	FAR	UP
33S	1E	11	DD	1920	W	PE	G	Y	L	FAR	UP
33S	1E	11	HH	2080	SE	PE	G	N	L	FAR	UP
33S	1E	11	T	2300	SE	ID	G	N	L	FAR	UP
33S	1E	11	U	2120	SE	PE	G	Y	H	FAR	UP
33S	1E	11	Y	2480	SE	IW	P	N	L	FAR	UP
33S	1E	12	J	2050	SW	IW	G	N	L	FAR	UP
33S	1E	12	P	2410	SE	ID	G	Y	L	FAR	UP
33S	1E	13	E	1900	S	IW	G	N	L	FAR	UP
33S	1E	15	N	2130	E	ID	F	Y	M	FAR	UP
33S	1E	22	A	3040	SE	IW	G	N	L	FAR	UP
33S	1E	22	B	3360	SE	IW	G	Y	M	FAR	UP
33S	1E	27	CC	3170	SE	IW	G	Y	M	FAR	UP
33S	1E	27	O	1910	E	IW	G	Y	H	FAR	UP
33S	2E	4	D	3360	S	ID	G	Y	M	FAR	UP
33S	2E	7	D	2460	SE	ID	G	Y	L	FAR	UP
33S	2E	7	Z	2460	W	ID	G	Y	L	FAR	UP

Functional at risk reaches in Lost Creek WA

33S	2E	11	B	3000	N	IW	G	N	H	FAR	UP
33S	2E	13	B	3540	NE	PE	F	Y	H	FAR	UP
33S	2E	13	C	3510	NW	PE	G	Y	H	FAR	UP
33S	2E	18	G	3230	SW	ID	G	N	L	FAR	UP
33S	2E	21	B	2400	NW	ID	G	N	L	FAR	UP
33S	2E	21	C	3000	W	PE	G	N	L	FAR	UP
33S	2E	23	D	3680	NW	IW	G	N	L	FAR	UP
33S	2E	23	G	4130	NW	ID	G	N	L	FAR	UP
33S	2E	27	F	3420	NW	IW	G	N	L	FAR	UP
33S	2E	27	G	3480	NW	IW	F	N	L	FAR	UP
33S	2E	29	A	3740	W	PE	G	N	L	FAR	UP
33S	2E	29	C	3080	W	PE	G	N	L	FAR	UP
33S	2E	31	A	2710	N	PE	F	Y	H	FAR	UP
33S	2E	31	B	2720	N	PE	G	Y	H	FAR	UP
33S	2E	31	C	2740	W	IW	P	N	L	FAR	UP
33S	2E	31	D	2760	NW	PE	G	N	L	FAR	UP
33S	3E	18	D	3230	N	PE	G	Y	L	FAR	UP
33S	3E	19	B	3230	N	PE	G	Y	L	FAR	UP
33S	3E	19	E	3850	N	PE	G	N	H	FAR	UP
33S	3E	29	A	3560	E	ID	G	Y	H	FAR	UP
33S	3E	29	B	3420	E	ID	G	Y	H	FAR	UP
33S	3E	29	C	3600	N	IW	F	Y	H	FAR	UP
33S	3E	29	E	3800	NE	PE	G	Y	H	FAR	UP
33S	3E	29	F	0	NE	PE	G	Y	H	FAR	UP
33S	3E	29	L	3800	E	PE	F	Y	M	FAR	UP
33S	3E	31	A	4040	E	IW	G	N	L	FAR	UP
33S	3E	31	L	4100	E	IW	F	N	L	FAR	UP
33S	3E	32	A	3800	SE	PE	G	N	L	FAR	UP
33S	3E	32	C	3860	NE	IW	G	N	L	FAR	UP
33S	3E	33	A	3140	E	ID	G	N	L	FAR	UP
33S	3E	33	B	3560	NE	ID	G	N	L	FAR	UP
34S	3E	2	B	3180	W	PE	F	N	L	FAR	UP
34S	3E	3	C	3060	N	PE	F	N	L	FAR	UP
34S	3E	5	A	3440	E	PE	G	N	L	FAR	UP
34S	3E	5	D	3620	SE	IW	G	N	L	FAR	UP
34S	3E	5	E	3780	NE	PE	G	N	L	FAR	UP
34S	3E	5	G	3620	E	PE	G	N	L	FAR	UP
34S	3E	6	A	4180	SE	IW	G	N	L	FAR	UP
34S	3E	7	B	3800	E	IW	G	N	L	FAR	UP
34S	3E	7	C	3940	E	ID	P	N	L	FAR	UP
34S	3E	7	E	4060	NE	IW	G	N	L	FAR	UP
34S	3E	7	H	3900	NE	ID	G	N	L	FAR	UP
34S	3E	7	J	4060	E	ID	G	N	L	FAR	UP
34S	3E	7	K	3960	E	ID	G	N	L	FAR	UP
34S	3E	7	L	4080	NE	ID	G	N	L	FAR	UP
34S	3E	9	A	3240	SE	PE	G	N	L	FAR	UP
34S	3E	12	B	3360	W	PE	G	N	L	FAR	UP

Functional reaches in Lost Creek WAU

TWNSH	RANGE	SECTIO	REAC	ELEV	ASPEC	CATEGO	CHNL_ST	SLUMP_PR	SLUMP_PO	RATING	TREND_F
32S	1E	35	C	3080	SE	ID	G	N	L	NON	DN
32S	2E	33	G	3500	SE	PE	P	N	L	NON	DN
33S	1E	11	B	2040	SW	IW	F	N	L	NON	DN
33S	1E	15	P	2680	E	ID	P	Y	H	NON	DN
33S	2E	35	A	4580	SW	PE	F	N	L	NON	DN
34S	3E	15	A	3240	NE	IW	P	N	L	NON	DN
32S	2E	33	C	3490	S	IW	G	N	L	NON	NA
33S	1E	11	LL	2480	SE	IW	G	N	L	NON	NA
33S	1E	11	N	1960	W	IW	G	N	L	NON	NA
33S	1E	11	S	2440	SE	PE	G	Y	H	NON	NA
33S	1E	11	X	2400	E	IW	G	N	L	NON	NA
33S	1E	14	E	1950	NE	IW	G	N	L	NON	NA
33S	1E	15	D	2340	S	IW	P	Y	H	NON	NA
33S	1E	15	M	2070	E	IW	P	N	L	NON	NA
33S	1E	27	D	1840	SE	IW	F	N	L	NON	NA
33S	1E	27	F	1580	SE	IW	P	Y	H	NON	NA
33S	1E	27	J	1640	SE	ID	G	N		NON	NA
33S	2E	4	E	3640	E	PE	P	N	L	NON	NA
33S	2E	5	G	3300	SW	ID	G	N	H	NON	NA
33S	2E	5	T	3970	NE	ID	G	N	L	NON	NA
33S	2E	11	A	2500	N	IW	P	Y	H	NON	NA
33S	2E	11	C	2280	N	IW	P	Y	H	NON	NA
33S	2E	11	E	2440	N	PE	P	Y	H	NON	NA
33S	2E	13	E	2720	NW	IW	F	Y	H	NON	NA
33S	2E	23	C	3770	NW	ID	F	N	L	NON	NA
33S	2E	27	E	3500	NW	IW	F	N	L	NON	NA
33S	3E	18	A	2980	NW	IW	G	N	H	NON	NA
34S	3E	2	A	3140	W	PE	G	N	L	NON	NA
34S	3E	3	E	3020	NE	PE	G	N	L	NON	NA
34S	3E	9	C	3080	NE	PE	F	N	L	NON	NA
33S	1E	11	A	2140	SW	IW	G	N	L	NON	UP
33S	2E	5	L	3150	W	ID	P	Y	H	NON	UP

DN- 6

APPENDIX 6

TRANSPORTAION MANAGMENT OBJECTIVES

TRANSPORTATION OBJECTIVES FOR WATERSHED ANALYSIS UNIT LOST CREEK

ROAD NO				ATTRIBUTES			RECOMMENDED MANAGEMENT ACTIONS					PHYSICAL DATA									ROAD USE CONSTRAINTS							IDENTIFIED ROAD USE							
				LENGTH	SURFACE	CONTROL	ACCESS	MMS LEVEL	STANDARD	TMS / MMO CONCURRENCE	DATE	ASHTO	AVE DAILY TRAFFIC	FOREST MGMT AREA	SOIL GRADE	SLOPE INSTABILITY	EROSION POTENTIAL	STREAM CROSSING	PRIVATE	GOVT	LARGE FUEL COMMERCIAL	NOXIOUS WEEDS	SPECIAL STATUS PLANTS	WATER QUALITY	WILDLIFE	COMM SITE	FIRE	FISHERIES	QUARRY ACCESS	RECREATION	PESTICIDE	RESIDENTIAL ACCESS	TIMBER	WILDLIFE
32 S	01 E	13	F	2.95	NAT	PV	O	3/2	M	Y	3/17/97	A-7	L	MATX	U	m	h	LOS	Y	Y	U	U						U	L	H	N		L
32 S	01 E	35	A	0.58	ABC	BL	O	3/2	M	Y	3/17/97	A-7	L	MATX	Y	h	m	LOS	Y	Y		U						N	L	H	N		L
32 S	01 E	35.01		0.61	ABC	BL	O	3/2	M	Y	3/17/97	A-7	L	MATX	N	h	m	LOS	Y	Y	Y							N	L	H	N		L
32 S	01 E	35.02	B	0.27	NAT	BL	D	3/1	D	N	3/17/97	A-7	L	MATX	N	m	h	LOS	Y	Y	U	U						U	L	L	N		L
32 S	01 E	35.04		0.28	NAT	BL	D	3/1	D	N	3/17/97	A-7	L	MATX	U	h	h	LOS	Y	Y	Y	U						N	L	L	N		L
32 S	01 E	35.05		0.24	NAT	BL	D	3/1	D	N	3/17/97	A-7	L	MATX	U	h	h	LOS	Y	Y	U	U						U	L	L	N		L
32 S	01 E	35.06		0.31	NAT	BL	D	3/1	D	N	3/17/97	A-7	L	MATX	U	m	h	LOS	N	Y	U	U						U	L	L	N		L
32 S	01 E	35.07		0.16	NAT	BL	D	3/1	D	N	3/17/97	A-7	L	MATX	U	m	h	LOS	N	Y	U	U						U	L	M	N		L
32 S	01 E	36	A2	0.05	NAT	PV	O	3/2	M	Y	3/17/97	A-7	L	LSR	U	m	h	LOS	Y	Y	U	U				Y		U	L	M	N		L
32 S	02 E	33	A	0.17	NAT	BL	D	3/1	D	N	3/17/97	A-7	L	MATX	U	m	h	LOS	P	Y	U	U				Y		Y	L	M	N		L
32 S	02 E	33	B	0.12	NAT	BL	D	3/1	D	N	3/17/97	A-7	L	MATX	U	m	h	LOS	P	Y	U	U				Y		U	L	L	N		L
32 S	02 E	33.01		0.67	NAT	BL	D	3/1	D	N	3/17/97	A-7	L	MATX	U	h	h	LOS	Y	Y	U	U				Y		U	L	L	N		L
32 S	02 E	33.02		0.41	NAT	BL	T	3/1	M	Y	3/17/97	A-7	L	MATX	U	m	h	LOS	P	Y	U	U				Y		U	L	H	N		L
32 S	02 E	34	A	0.29	ASC	BL	O	3/2	M	Y	3/17/97	A-7	M	MATX	U	m	h	LOS	Y	Y	Y	U				Y		Y	H	H	N		L
32 S	02 E	34	B	0.52	ASC	BL	O	3/2	M	Y	3/17/97	A-7	M	MATX	U	m	m	LOS	Y	Y	Y	U						Y	H	H	N		L
32 S	02 E	34	C	2.29	ABC	BL	O	3/2	M	Y	3/17/97	A-7	M	MATX	U	m	m	LOS	Y	Y	Y	U						Y	H	H	N		L
32 S	02 E	34	D	1.15	ABC	BL	O	3/2	M	Y	3/17/97	A-7	M	MATX	U	m	m	LOS	Y	Y	Y	U						Y	H	H	N		L
32 S	02 E	34	E	0.48	ABC	BL	O	3/2	M	Y	3/17/97	A-7	M	MATX	U	m	h	LOS	Y	Y	Y	U						Y	H	H	N		L
32 S	02 E	34	F	0.28	NAT	BL	O	3/2	M	Y	3/17/97	A-7	M	MATX	U	m	h	LOS	Y	Y	Y	U						Y	H	H	N		L
33 S	01 E	2	A2	1.57	NAT	PV	T	3/1	M	Y	3/17/97	A-7	L	MATX	U	I	h	LOS	Y	Y	U	U					M	U	L	H	N		L
33 S	01 E	2	B	0.4	NAT	BL	T	3/2	M	Y	3/17/97	A-7	L	MATX	N	m	h	LOS	Y	Y	N	U					M	N	L	H	N		L
33 S	01 E	2	C	0.3	NAT	PV	T	3/1	M	Y	3/17/97	A-7	L	MATX	U	m	m	LOS	Y	Y	U	U		BG			M	U	L	H	N		L
33 S	01 E	2	D	0.19	NAT	BL	T	3/2	M	Y	3/17/97	A-7	L	MATX	U	m	h	LOS	Y	Y	U	U					M	U	L	H	N		L
33 S	01 E	2	E	0.55	NAT	PV	T	3/1	M	Y	3/17/97	A-7	L	MATX	U	m	h	LOS	Y	Y	U	U					M	U	L	H	N		L
33 S	01 E	3		0.13	NAT	BL	D	3/2	D	N	3/17/97	A-7	L	MATX	N	m	h	LOS	N	Y	U	U		BG			L	N	L	M	N		L
33 S	01 E	11		0.19	NAT	BL	T	3/2	M	Y	3/17/97	A-7	L	MATX	U	m	h	LOS	Y	Y	U	U		BG			M	U	L	H	N		L
33 S	01 E	11.01		0.45	NAT	PV	T	3/2	M	Y	3/17/97	A-7	L	LSR	U	m	h	LOS	Y	Y	U	U		BG			M	U	L	M	N		L
33 S	01 E	11.02		0.47	NAT	PV	O	3/2	M	Y	3/17/97	A-7	L	MATX	U	m	h	LOS	Y	Y	U	Y		BG			M	U	L	M	N		L
33 S	01 E	14.01	B	1	NAT	BL	T	3/2	I	N	3/17/97	A-7	L	MATX	Y	m	h	LOS	Y	Y	N	U		BG			M	N	L	H	N		L
33 S	01 E	14.01	C	0.33	NAT	PV	T	3/2	I	N	3/17/97	A-7	L	MATX	U	m	h	LOS	Y	Y	U	U					M	U	L	H	N		L
33 S	01 E	14.01	D	0.46	NAT	BL	T	3/2	I	N	3/17/97	A-7	L	MATX	U	m	h	LOS	Y	Y	U	U					M	U	L	H	N		L
33 S	01 E	14.02		0.94	NAT	BL	T	3/2	I	N	3/17/97	A-7	L	ADWA	Y	m	h	LOS	Y	Y	N	U		BG			H	N	L	H	N		L
33 S	01 E	15		0.5	NAT	BL	D	3/1	I	N	3/17/97	A-7	L	MATX	Y	h	h	LOS	N	Y	N	U		BG			M	N	L	M	N		L
33 S	01 E	22.01		0.36	PRR	PV	O	3/1	M	Y	3/17/97	A-7	L	MATX	U	I	h	LOS	Y	Y	U	U					M	U	L	M	N		L
33 S	01 E	23	A1	0.17	NAT	BL	O	3/2	M	Y	3/17/97	A-7	L	MATX	Y	m	h	LOS	Y	Y	N	U					M	N	M	L	N		L
33 S	01 E	23	A2	0.27	NAT	BL	T	3/2	I	N	3/17/97	A-7	L	MATX	Y	m	h	LOS	Y	Y	N	U					M	N	L	H	N		L
33 S	01 E	25		1.49	BST	BL	O	4/3	M	Y	3/17/97	A-7	M	MATX	U	I	I	LOS	Y	Y	U	Y					H	U	L	H	N		L
33 S	01 E	25.01	A	2.27	ABC		O	3/2	M	Y	3/17/97	A-7	L	MATX	U	I	I	LOS	Y	Y	U	U					H	U	L	H	N		L
33 S	01 E	25.01	B	0.64	ABC		O	3/2	M	Y	3/17/97	A-7	L	MATX	U	m	h	LOS	Y	Y	U	U					M	U	L	H	N		L
33 S	01 E	27	B	1.22	ASC		O	3/2	M	Y	3/17/97	A-6	M	MATX	N	m	h	LOS	Y	Y	Y	U					H	N	M	H	N		L
33 S	01 E	27	C	0.6	ASC	BL	O	3/2	M	Y	3/17/97	A-6	M	MATX	N	m	h	LOS	Y	Y	Y	U					H	N	M	H	N		L
33 S	01 E	27	D	0.96	ASC	BL	O	3/2	M	Y	3/17/97	A-6	M	MATX	N	m	h	LOS	Y	Y	Y	U					H	N	M	H	N		L
33 S	01 E	27	E	0.7	PRR	BL	O	3/2	M	Y	3/17/97	A-6	M	MATX	N	m	h	LOS	Y	Y	Y	U					H	N	M	H	N		L
33 S	01 E	27	F	0.09	ASC	BL	O	3/2	M	Y	3/17/97	A-6	M	MATX	N	m	h	LOS	Y	Y	Y	U					H	N	M	H	N		L
33 S	01 E	27	G	0.58	ASC	BL	O	3/2	M	Y	3/17/97	A-6	M	LSR	Y	m	h	LOS	Y	Y	Y	U					H	N	M	H	N		L
33 S	01 E	27	H	0.07	NAT	PB	O	3/2	M	Y	3/17/97	A-6	L	MATX	Y	m	m	LOS	Y	Y	Y	U					H	N	L	H	N		L
33 S	01 E	27	I	0.21	ASC	BL	O	3/2	M	Y	3/17/97	A-6	L	MATX	Y	m	h	LOS	Y	Y	Y	U					H	N	L	H	N		L
33 S	01 E	27	J	0.91	NAT	PB	O	3/2	M	Y	3/17/97	A-6	L	MATX	Y	m	h	LOS	Y	Y	N	U					H	N	L	H	N		L
33 S	01 E	27	K	0.35	ASC	BL	O	3/2	M	Y	3/17/97	A-6	L	MATX	Y	m	h	LOS	Y	Y	Y	U					H	N	L	H	N		L
33 S	01 E	27	L	0.75	ASC	BL	O	3/2	M	Y	3/17/97	A-6	L	MATX	Y	m	m	LOS	Y	Y	Y	U					H	N	L	H	N		L
33 S	01 E	27	M	0.98	ABC	BL	O	3/2	M	Y	3/17/97	A-6	L	MATX	U	m	m	LOS	Y	Y	U	U					H	U	L	H	N		L
33 S	01 E	27	N	0.02	ABC	BL	O	3/2	M	Y	3/17/97	A-6	L	MATX	U	m	h	LOS	Y	Y	U	U					H	U	L	H	N		L
33 S	01 E	27	O	0.12	NAT	BL	O	3/2	M	Y	3/17/97	A-6	L	CONN	U	m	h	LOS	Y	Y	U	U					H	U	L	H	N		L
33 S	01 E	35		0.19	NAT	PV	T	3/1	M	Y	3/17/97	A-7	L	MATX	U	I	h	LOS	Y	Y	U	U					M		L	H	N		L
33 S	01 E	35.01		0.17	NAT	BL	O	3/1	D	N	3/17/97	A-7	L	MATX	U	m	m	LOS	Y	Y	U	U					M		L	H	N		L
33 S	01 E	36	A	1.09	ABC	PV	O	3/2	M	Y	3/17/97	A-7	L	MATX	U	m	m	LOS	Y	Y	U	U					M		L	H	N		L
33 S	01 E	36.01		0.27	ABC	PV	O	3/2	M	Y	3/17/97	A-7	L	MATX	U	I	h	LOS	Y	Y	U	U					M		L	M	N		L
33 S	01 E	36.02	A	0.53	ABC	PV	O	3/2	M	Y	3/17/97	A-7	L	MATX	U	m	m		Y	Y	U	U					M	U	L	H	N		L
33 S	01 E	36.02	B	0.42	ABC	PV	O	3/2	M	Y	3/17/97	A-7	L	MATX	U	m	m		Y	Y	U	U					M	U	L	H	N		L
33 S	02 E	5	A	0.08	NAT	BL	O	3/1	D	N	3/17/97	A-7	L	MATX	P				Y	Y	U	U					L	N	L	H	N		L
33 S	02 E	5	B	0.06	NAT	PB	T	3/1	D	N	3/17/97	A-7	L	MATX					Y	Y	U	U					M	N	L	H	N		L

TRANSPORTATION OBJECTIVES FOR WATERSHED ANALYSIS UNIT: LOST CREEK

ROAD NO				ATTRIBUTES: LENGTH	SURFACE	CONTROL	RECOMMENDED MANAGEMENT ACTIONS: ACCESS	MMS LEVEL	STANDARD	TMS - MO CONCURRENCE	MO DATE	PHYSICAL DATA: AASHTO	AVE DAILY TRAFFIC	FOREST VGT AREA	15% GRADE	SLOPE INSTABILITY	EROSION POTENTIAL	WATERSHED	ROAD USE CONSTRAINTS: ACCESS TO PRIVATE	BK LOADS	LARGE FILL CMPS	NOXIOUS WEEDS	SPECIAL STAT PLANTS	WATER QUALITY	WILDLIFE	IDENTIFIED ROAD USE: COMM SITE	FIRE	FISHERIES	QUARRY ACCESS	RECREATION	REFORESTATION	RESIDENTIAL ACCESS	TIMBER	WILDLIFE
33 S	02 E	5.01		0.22	NAT	BL	T	3/1	D	N	3/17/97	A-7	L	MATX	U	m	h	LOS	P	Y	U	U					M		U	L	H	N		L
33 S	02 E	13	A1	0.49	ASC	BL	O	3/2	M	Y	3/17/97	A-6	L	MATX	U	m	m	LOS	Y	Y	U	U					M		U	L	H	N		L
33 S	02 E	13	A2	0.78	NAT	BL	O	3/2	M	Y	3/17/97	A-6	L	MATX	U	m	h	LOS	Y	Y	U	U					M		U	L	H	N		L
33 S	02 E	13	B	0.38	PRR	PV	O	3/2	M	Y	3/17/97	A-6	L	MATX	U	m	m	LOS	Y	Y	U	U					M		U	L	H	N		L
33 S	02 E	13.01	A	1.04	PRR	BL	O	3/2	M	Y	3/17/97	A-6	L	MATX	U	h	h	LOS	Y	Y	U	U					M		U	L	H	N		L
33 S	02 E	13.01	B	0.22	PRR	PV	O	3/2	M	Y	3/17/97	A-6	L	MATX	U	h	h	LOS	Y	Y	U	U					M		U	L	H	N		L
33 S	02 E	13.02	A	0.15	ABC	PB	O	3/2	M	Y	3/17/97	A-6	L	MATX	U	h	h	LOS	Y	Y	U	U					M		U	L	H	N		L
33 S	02 E	13.02	B	0.6	ABC	PV	O	3/2	M	Y	3/17/97	A-6	L	MATX	U	h	h	LOS	Y	Y	U	U					M		U	L	H	N		L
33 S	02 E	13.03	A	0.12	NAT	PV	O	3/2	M	Y	3/17/97	A-6	L	MATX	U	m	h	LOS	Y	Y	U	U							U	L	M	N		L
33 S	02 E	13.04		0.98	ASC	BL	T	3/1	D	N	3/17/97	A-6	L	MATX	U	m	m	LOS	P	Y	U	U					M		U	L	H	N		L
33 S	02 E	13.05		0.43	NAT	BL	T	3/1	M	Y	3/17/97	A-6	L	MATX	U	m	h	LOS	P	Y	U	U					M		U	L	H	N		L
33 S	02 E	14	A	0.66	NAT	PV	O	3/2	I	N	3/17/97	A-6	L	MATX	U	m	h	LOS	Y	Y	U	U					M		U	L	H	N		L
33 S	02 E	14	B	0.79	NAT	BL	O	3/2	I	N	3/17/97	A-6	L	MATX	U	m	h	LOS	Y	Y	U	U					M		U	L	H	N		L
33 S	02 E	14	C	0.65	NAT	PV	O	3/2	I	N	3/17/97	A-6	L	MATX	U	m	h	LOS	Y	Y	U	U					M		U	L	H	N		L
33 S	02 E	14	D	0.33	NAT	BL	O	3/2	I	N	3/17/97	A-6	L	MATX	U	m	h	LOS	Y	Y	U	U							U	L	H	N		L
33 S	02 E	14.01		0.76	PRR	PV	D	3/1	D	N	3/17/97	A-7	L	MATX	U	m	h	LOS	Y	Y	U	U					M		U	L	H	N		L
33 S	02 E	14.02		1.05	NAT	PV	O	3/2	M	Y	3/17/97	A-7	L	MATX	U	h	h	LOS	Y	Y	U	U					M		U	L	H	N		L
33 S	02 E	14.03		1.33	NAT	PV	O	3/2	M	Y	3/17/97	A-7	L	MATX	U	m	h	LOS	Y	Y	U	U					M		U	L	H	N		L
33 S	02 E	15	A	0.95	ABC	BL	O	3/2	M	Y	3/17/97	A-6	L	CONN	U	m	h	LOS	Y	Y	U	U					M		U	L	H	N		L
33 S	02 E	15	B	0.57	ASC	BL	O	3/2	M	Y	3/17/97	A-6	L	MATX	U	m	h	LOS	Y	Y	U	U					M		U	L	M	N		L
33 S	02 E	15	C	0.55	PRR	PV	O	3/2	M	Y	3/17/97	A-6	L	MATX	U	m	h	LOS	Y	Y	U	U					M		U	L	M	N		L
33 S	02 E	15.01	A	0.3	PRR	PV	O	3/2	M	Y	3/17/97	A-6	L	MATX	U	h	h	LOS	Y	Y	U	U					L		U	L	L	N		L
33 S	02 E	15.01	B	1.25	PRR	PV	O	3/2	M	Y	3/17/97	A-6	L	MATX	U	h	h	LOS	Y	Y	U	U					M		U	L	M	N		L
33 S	02 E	19		0.38	PRR	BL	T	3/1	M	Y	3/17/97	A-7	L	MATX	U	l	h	LOS	N	Y	N	U					M		N	H	M	N		L
33 S	02 E	20		1.15	NAT	PV	O	3/2	M	Y	3/17/97	A-7	L	MATX	U	l	m	LOS	Y	Y	U	Y					M		U	L	L	N		L
33 S	02 E	21		0.7	PRR	PV	O	3/2	M	Y	3/17/97	A-7	L	MATX	U	l	m	LOS	Y	Y	U	U					M		U	L	L	N		L
33 S	02 E	22	A	0.52	ABC	BL	O	3/2	M	Y	3/17/97	A-6	L	MATX	Y	m	m	LOS	Y	Y	Y	U					M		U	L	H	N		L
33 S	02 E	22	B	0.47	ABC	BL	O	3/2	M	Y	3/17/97	A-6	L	MATX	Y	l	m	LOS	Y	Y	N	U					M		N	L	H	N		L
33 S	02 E	22.01	A	0.62	ABC	BL	O	3/2	M	N	3/17/97	A-6	L	MATX	N	h	h	LOS	Y	Y	N	U					M		N	L	L	N		L
33 S	02 E	22.01	B	0.53	NAT	PV	O	3/2	I	Y	3/17/97	A-6	L	MATX	U	h	h	LOS	Y	Y	U	U					M		U	L	L	N		L
33 S	02 E	22.02		1.61	ABC	PV	O	3/2	M	Y	3/17/97	A-6	L	MATX	U	l	m	LOS	Y	Y	U	U					M		U	L	L	N		L
33 S	02 E	22.03		1.52	ASC	BL	O	3/2	M	Y	3/17/97	A-6	L	MATX	N	l	m	LOS	N	Y	Y	U					H		N	L	H	N		L
33 S	02 E	22.04	A1	1.25	PRR	PV	O	3/2	M	Y	3/17/97	A-6	L	MATX	U	m	m	LOS	Y	Y	U	U					M		U	L	M	N		L
33 S	02 E	22.04	A2	0.25	PRR	PV	O	3/2	M	Y	3/17/97	A-6	L	MATX	U	m	m	LOS	Y	Y	U	U					L		U	L	L	N		L
33 S	02 E	22.05		0.58	NAT	BL	D	3/1	D	N	3/17/97	A-6	L	MATX	Y	m	h	LOS	Y	Y	Y	U					M		N	L	M	N		L
33 S	02 E	22.06	A	0.05	NAT	PV	O	3/2	M	Y	3/17/97	A-6	L	CONN	U	m	m	LOS	Y	Y	U	U					L		U	L	L	N		L
33 S	02 E	22.07		0.48	PRR	PV	O	3/2	M	Y	3/17/97	A-6	L	MATX	U	m	m	LOS	Y	Y	U	U					M		U	L	L	N		L
33 S	02 E	22.08		0.34	PRR	PV	O	3/2	M	Y	3/17/97	A-6	L	CONN	U	m	h	LOS	Y	Y	U	U							U	L	L	N		L
33 S	02 E	23		0.89	NAT	BL	D	3/1	D	N	3/17/97	A-6	L	MATX	U	l	m	LOS	N	Y	U	U					H		U	L	H	N		L
33 S	02 E	23.01		0.26	NAT	PV	D	3/1	D	N	3/17/97	A-6	L	MATX	U	m	h	LOS	Y	Y	U	U					M		U	L	L	N		L
33 S	02 E	24		0.28	ABC	PV	O	3/2	M	Y	3/17/97	A-7	L	MATX	U	m	m	LOS	Y	Y	U	U					M		U	L	M	N		L
33 S	02 E	24.01		0.43	NAT	PV	O	3/2	M	Y	3/17/97	A-7	L	MATX	U	m	h	LOS	Y	Y	U	U					M		U	L	L	N		L
33 S	02 E	24.02		0.19	NAT	PV	O	3/2	M	Y	3/17/97	A-7	L	MATX	U	m	h	LOS	Y	Y	U	U							U	L	L	N		L
33 S	02 E	25	A	0.66	NAT	BL	T	3/1	M	N	3/17/97	A-7	L	MATX	U	m	h	LOS	Y	Y	U	U					L		U	L	M	N		L
33 S	02 E	25	B	0.38	NAT	PV	O	3/2	D	Y	3/17/97	A-7	L	MATX	U	m	h	LOS	Y	Y	U	U					M		U	L	M	N		L
33 S	02 E	25.01		0.5	NAT	BL	T	3/1	M	Y	3/17/97	A-7	L	MATX	U	m	h	LOS	N	Y	U	U					M		U	L	H	N		L
33 S	02 E	25.02	A	0.4	ASC	BL	O	3/2	M	Y	3/17/97	A-7	L	MATX	U	l	m	LOS	Y	Y	U	U					M		U	L	H	N		L
33 S	02 E	25.02	B	0.2	NAT	BL	O	3/2	I	N	3/17/97	A-7	L	MATX	U	m	h	LOS	Y	Y	U	U					M		U	L	H	N		L
33 S	02 E	25.03		0.22	ASC	BL	O	3/2	M	Y	3/17/97	A-7	L	LSR	U	m	m	LOS	N	Y	U	U					M		Y	L	H	N		L
33 S	02 E	26	A	0.2	PRR	PV	O	3/2	M	Y	3/17/97	A-7	L	MATX	U	m	m	LOS	Y	Y	U	U					M		U	L	H	N		L
33 S	02 E	26	B	0.13	NAT	BL	O	3/1	D	N	3/17/97	A-7	L	MATX	U	m	h	LOS	N	Y	U	U					M		U	L	H	N		L
33 S	02 E	27	A	0.52	ABC	BL	O	3/2	M	Y	3/17/97	A-7	L	MAT	U	m	m	LOS	Y	Y	U	U					M		U	L	H	N		L
33 S	02 E	27	B	0.44	ABC	PV	O	3/2	M	Y	3/17/97	A-7	L	MAT	U	m	m	LOS	Y	Y	U	U					M		U	L	H	N		L
33 S	02 E	27.01	A	1.69	ABC	SL	O	3/2	M	Y	3/17/97	A-6	L	MAT	U	m	h	LOS	Y	Y	U	U					M		U	L	H	N		L
33 S	02 E	27.01	B	0.26	ABC	BL	O	3/2	M	Y	3/17/97	A-6	L	MAT	U	m	m	LOS	Y	Y	U	U					H		U	L	H	N		L
33 S	02 E	27.01	C	0.78	ABC	PV	O	3/2	M	Y	3/17/97	A-6	L	MAT	U	m	m	LOS	Y	Y	U	U					M		U	L	H	N		L
33 S	02 E	27.02		0.37	ABC	BL	T	3/1	D	N	3/17/97	A-6	L	MAT	N	m	m	LOS	N	Y	N	U					M		N	L	M	N		L
33 S	02 E	27.03		0.22	ABC	BL	T	3/1	D	N	3/17/97	A-6	L	MAT	N	m	m	LOS	N	Y	N	U					M		N	L	H	N		L
33 S	02 E	27.04		0.7	ABC	BL	O	3/1	D	N	3/17/97	A-6	L	MATX	N	m	m	LOS	P	Y	Y	U					M		N	L	H	N		L
33 S	02 E	27.05		0.59	ABC	SL	O	3/1	D	N	3/17/97	A-6	L	MATX	N	m	m	LOS	N	Y	Y	U					M		N	L	H	N		L
33 S	02 E	27.06		0.38	ABC	BL	O	3/2	M	Y	3/17/97	A-7	L	MAT	N	m	m	LOS	Y	Y	N	U					M		N	L	H	N		L

TRANSPORTATION OBJECTIVES FOR WATERSHED ANALYSIS UNIT LOST CREEK

ROAD NO				ATTRIBUTES			RECOMMENDED MANAGEMENT ACTIONS					PHYSICAL DATA							ROAD USE CONSTRAINTS							IDENTIFIED ROAD USE						
				LENGTH	SURFACE	CONTROL	ACCESS	MMS LEVEL	STANDARD	TIMS - MOC CONCURRENCE	IMJ DATE	ASPECT	TRAFFIC	AVE DAILY	FOREST MGMT AREA	SLOPE	INSTABILITY	EROSION POTENTIAL	WATERSHED	ACCESS TO PRIVATE	ROAD LOADS	ARCHIVE FILE COMMENTS	NOXIOUS WEEDS	SPECIAL STATUS PLANTS	WATER QUALITY	WILDLIFE	COMM SITE	FISHERIES	QUARRY ACCESS	RECREATION	REFORESTATION	RESIDENTIAL ACCESS	TIMBER	WILDLIFE
33 S	02 E	27.07	A	0.26	ABC	PV	O	3/2	M	Y	3/17/97	A-7	L	MATX	U	m	m	LOS	Y	Y	U	U				M		U	L	H	N		L
33 S	02 E	27.08		0.16	ABC	BL	D	3/2	M	N	3/17/97	A-7	L	MAT	N	m	m	LOS	Y	Y	U	U				M		N	L	L	N		L
33 S	02 E	28	A	0.44	NAT	BL	O	3/2	I	N	3/17/97	A-7	L	MAT	U	m	h	LOS	Y	Y	U	U				M		U	L	H	N		L
33 S	02 E	28	B	0.37	NAT	BL	O	3/1	D	N	3/17/97	A-7	L	MAT	U	I	h	LOS	Y	Y	U	U				M		U	L	H	N		L
33 S	02 E	28.01		1	ABC	PV	O	3/2	M	Y	3/17/97	A-7	L	MAT	U	h	h	LOS	Y	Y	U	U				M		U	L	L	N		L
33 S	02 E	28.02		0.37	NAT	PV	O	3/2	M	Y	3/17/97	A-7	L	MAT	U	h	h	LOS	Y	Y	U	U				M		U	L	L	N		L
33 S	02 E	29		1.76	NAT	BL	O	3/2	M	Y	3/17/97	A-7	L	MAT	U	m	m	LOS	Y	Y	U	U				M		Y	L	H	N		L
33 S	02 E	29.01		0.53	ABC	PV	O	3/2	M	Y	3/17/97	A-7	L	MAT	U	m	h	LOS	Y	Y	U	U				M		U	L	L	N		L
33 S	02 E	29.02		0.5	ABC	PV	O	3/2	M	Y	3/17/97	A-7	L	MAT	U	m	h	LOS	Y	Y	U	U				M		U	L	L	N		L
33 S	02 E	29.03		1.3	ABC	PV	O	3/2	M	Y	3/17/97	A-7	L	MAT	U	m	m	LOS	Y	Y	U	U				M		U	L	L	N		L
33 S	02 E	29.04		0.57	ABC	PV	O	3/2	M	Y	3/17/97	A-7	L	MAT	U	m	m	LOS	Y	Y	U	U				M		U	L	L	N		L
33 S	02 E	31	A	0.14	ABC	PB	O	3/2	M	Y	3/17/97	A-7	L	MATX	U	m	m	LOS	Y	Y	U	U				M		U	L	H	N		L
33 S	02 E	31	B	0.21	ABC	BL	O	3/2	M	Y	3/17/97	A-7	L	MAT	U	m	m	LOS	Y	Y	U	U				M		U	L	H	N		L
33 S	02 E	31	C	0.48	ASC	PV	O	3/2	M	Y	3/17/97	A-7	L	MAT	U	m	m	LOS	Y	Y	U	U				M		U	L	H	N		L
33 S	02 E	31	D	0.53	ABC	BL	O	3/2	M	Y	3/17/97	A-7	L	MAT	U	m	m	LOS	Y	Y	U	U				M		U	L	H	N		L
33 S	02 E	31.01		0.68	ABC	BL	T	3/1	M	Y	3/17/97	A-7	L	MATX	U	m	m	LOS	P	Y	U	U			SN	M		U	L	M	N		L
33 S	02 E	31.02	A	0.26	ABC	BL	O	3/2	M	Y	3/17/97	A-7	L	MAT	U	I	m	LOS	Y	Y	U	U				M		U	L	M	N		L
33 S	02 E	31.02	B	0.45	ABC	BL	O	3/2	M	Y	3/17/97	A-7	L	MAT	U	I	m	LOS	Y	Y	U	U				M		U	L	M	N		L
33 S	02 E	31.03		0.03	NAT	BL	O	3/2	M	Y	3/17/97	A-7	L		U	m	h	LOS	N	Y	N	U				L		N	L	L	N		L
33 S	02 E	31.04	A	0.35	ABC	BL	O	3/2	M	Y	3/17/97	A-7	L	MATX	U	m	m	LOS	Y	Y	U	U				M		U	L	M	N		L
33 S	02 E	31.04	B	0.76	ABC	PV	O	3/2	M	Y	3/17/97	A-7	L	MATX	U	m	m	LOS	Y	Y	U	U				M		U	L	M	N		L
33 S	02 E	31.05	A	0.24	PRR	BL	T	3/1	D	N	3/17/97	A-7	L	MATX	U	m	m	LOS	N	Y	U	U				M		U	L	L	N		L
33 S	02 E	31.06		0.56	ABC	BL	T	3/1	D	N	3/17/97	A-7	L	MATX	U	m	m	LOS	P	Y	U	U			SN	M		U	L	M	N		L
33 S	02 E	31.07		0.12	NAT	PV	O	3/2	M	Y	3/17/97	A-7	L	MATX	U	m	m	LOS	Y	Y	U	U				L		U	L	L	N		L
33 S	02 E	32		1.52	ABC	PV	T	3/1	M	N	3/17/97	A-7	L	MAT	U	m	m	LOS	Y	Y	U	U				M		U	L	L	N		L
33 S	02 E	32.01	A	0.11	ABC	PV	O	3/2	M	Y	3/17/97	A-7	L	MAT	U	m	h	LOS	Y	Y	U	U				M		U	L	L	N		L
33 S	02 E	32.01	B	0.65	NAT	PV	O	3/2	M	Y	3/17/97	A-7	L	MAT	U	m	h	LOS	Y	Y	U	U				M		U	L	L	N		L
33 S	02 E	32.02		0.45	ABC	PV	O	3/2	M	Y	3/17/97	A-7	L	MAT	U	m	h	LOS	Y	Y	U	U				M		U	L	L	N		L
33 S	02 E	32.03		0.49	ABC	PV	O	3/2	M	Y	3/17/97	A-7	L		U	m	m	LOS	Y	Y	U	U				M		U	L	L	N		L
33 S	02 E	32.04		0.17	PRR	PV	O	3/2	M	Y	3/17/97	A-7	L		U	m	m	LOS	Y	Y	U	U				L		U	L	L	N		L
33 S	02 E	32.05		0.3	ABC	PV	O	3/2	M	Y	3/17/97	A-7	L		U	m	m	LOS	Y	Y	U	U				M		U	L	L	N		L
33 S	02 E	33	A	1.51	ASC	PB	O	3/2	M	Y	3/17/97	A-7	M	MAT	U	m	m	LOS	Y	Y	U	U				H		U	L	H	N		L
33 S	02 E	33	B	1.66	ASC	BL	O	3/2	M	Y	3/17/97	A-7	M	MAT	U	m	m	LOS	Y	Y	U	U				H		U	L	H	N		L
33 S	02 E	33	C	1.02	ASC	BL	O	3/2	M	Y	3/17/97	A-7	M	MAT	U	m	m	LOS	Y	Y	U	U				H		U	L	H	N		L
33 S	02 E	33.01	A	0.09	PRR	BP	O	3/2	M	Y	3/17/97	A-6	L	MAT	N	m	m	LOS	Y	Y	N	U				H		N	L	H	N		L
33 S	02 E	33.01	B	0.42	NAT	BL	D	3/1	D	N	3/17/97	A-6	L	MAT	N	m	h	LOS	Y	Y	Y	U				H		N	L	H	N		L
33 S	02 E	33.02	A	0.09	PRR	PV	O	3/2	M	Y	3/17/97	A-6	L	MAT	U	m	m	LOS	Y	Y	U	U				H		U	L	L	N		L
33 S	02 E	33.02	B	0.1	NAT	PV	O	3/2	M	Y	3/17/97	A-6	L	MAT	U	m	h	LOS	Y	Y	U	U				L		U	L	L	N		L
33 S	02 E	33.03		0.51	NAT	BL	T	3/1	M	N	3/17/97	A-6	L	MAT	N	m	h	LOS	Y	Y	N	U				M		N	L	M	N		L
33 S	02 E	33.04		0.19	PRR	PV	O	3/2	M	Y	3/17/97	A-6	L		U	m	m	LOS	Y	Y	U	U				L		U	L	L	N		L
33 S	02 E	33.05		0.9	PRR	PV	O	3/2	M	Y	3/17/97	A-6	L		U	m	m	LOS	Y	Y	U	U				M		U	L	L	N		L
33 S	02 E	34	A	1.1	NAT	PV	O	3/2	M	Y	3/17/97	A-6	L	MAT	U	m	m	LOS	Y	Y	U	U				M		U	L	H	N		L
33 S	02 E	34.01		0.76	PRR	PV	O	3/2	M	Y	3/17/97	A-6	L	MAT	U	m	h	LOS	Y	Y	U	U				M		U	L	L	N		L
33 S	02 E	34.02		1.14	NAT	PV	O	3/2	M	Y	3/17/97	A-6	L	MAT	U	m	m	LOS	Y	Y	U	U				M		U	L	M	N		L
33 S	02 E	34.03	A	0.09	ASC	PB	O	3/2	M	Y	3/17/97	A-6	L	MAT	N	m	m	LOS	Y	Y	Y	U				M		N	L	H	N		L
33 S	02 E	34.03	B	0.54	ASC	BL	O	3/2	M	Y	3/17/97	A-6	L	MAT	N	m	m	LOS	Y	Y	Y	U				M		N	L	H	N		L
33 S	02 E	34.04		0.52	ABC	PV	O	3/2	M	Y	3/17/97	A-7	L		U	m	m	LOS	Y	Y	U	U				M		U	L	L	N		L
33 S	02 E	35		0.45	ASC	BL	T	3/1	D	N	3/17/97	A-7	L	MAT	U	m	m	LOS	N	Y	U	U				M		U	L	H	N		L
33 S	02 E	35.01		0.03	PRR	PV	O	3/1	M	Y	3/17/97	A-7	L	MAT	U	m	m	LOS	Y	Y	U	U						U	L	H	N		L
33 S	02 E	35.02	A	0.22	ASC	PB	O	3/2	M	Y	3/17/97	A-7	L	MAT	U	m	m	LOS	Y	Y	U	U				M		U	L	H	N		L
33 S	02 E	35.02	B	0.28	PRR	PB	O	3/2	M	Y	3/17/97	A-7	L	MATX	U	m	m	LOS	Y	Y	U	U				M		U	L	H	N		L
33 S	02 E	35.02	C	0.32	PRR	PV	O	3/2	M	Y	3/17/97	A-7	L	MATX	U	m	h	LOS	Y	Y	U	U				M		U	L	H	N		L
33 S	02 E	35.02	D	0.43	NAT	BL	O	3/2	M	Y	3/17/97	A-7	L	MATX	U	m	h	LOS	Y	Y	U	U				M		U	L	H	N		L
33 S	02 E	35.03		0.51	ABC	BL	T	3/2	D	N	3/17/97	A-7	L	MAT	N	m	m	LOS	N	Y	N	U				M		N	L	H	N		L
33 S	02 E	35.04		0.72	ABC	BL	T	3/2	I	N	3/17/97	A-7	L	LSR	I	m	m	LOS	N	Y	U	U				M		U	L	H	N		L
33 S	02 E	35.05	A	0.71	PRR	PV	O	3/2	M	Y	3/17/97	A-7	L	MATX	U	m	m	LOS	Y	Y	U	U				M		U	L	M	N		L
33 S	02 E	35.05	B	0.2	PRR	BL	O	3/2	M	Y	3/17/97	A-7	L	MATX	U	m	m	LOS	Y	Y	U	U				M		U	L	M	N		L
33 S	02 E	36.01	A	1.05	PRR	PV	O	3/2	M	Y	3/17/97	A-6	L	LSR	U	m	m	LOS	Y	Y	U	U				M		U	L	L	N		L
33 S	02 E	36.02		0.62	PRR	PV	O	3/2	M	Y	3/17/97	A-6	L		U	m	m	LOS	Y	Y	U	U				M		U	L	L	N		L
33 S	03 E	19		0.81	NAT	BL	T	3/1	D	N	3/17/97	A-6	L	LSR	U	m	m	LOS	N	Y	N	U			SN			U	L	H	N		L
33 S	03 E	18.01	A	0.57	ASC	BL	T	3/1	M	Y	3/17/97	A-6	L	MATX	U	m	m	LOS	Y	Y	U	U						U	L	M	N		L

TRANSPORTATION OBJECTIVES FOR WATERSHED ANALYSIS UNIT: LOST CREEK

ROAD NO				ATTRIBUTES			RECOMMENDED MANAGEMENT ACTIONS					PHYSICAL DATA						ROAD USE CONSTRAINTS							IDENTIFIED ROAD USE							
				LENGTH	SURFACE	CONTROL	ACCESS	MMS LEVEL	STANDARD	MMS CONCURRENCE	DATE	ASSHTO	TRAFFIC	MGMT AREA	GRADE	SOIL INSTABILITY	EROSION POTENTIAL	WATERSHED	PRIVATE	ROAD LOADS	FILL CMPS	NOXIOUS WEEDS	SPECIAL STAT PLANTS	WATER QUALITY	WILDLIFE	COMM SITE	FIRE	FISHERIES	DUST ACCESS	RECREATION	FOREST ADMIN	RESIDENTIAL ACCESS	TIMBER	WILDLIFE
33 S	03 E	19	A1	1.58	ASC	BL	O	3/2	M	Y	3/17/97	A-6	M	MATX	U	m	m	LOS	Y	Y	U	U						U	L	H	N	L
33 S	03 E	19	A2	0.36	ASC	BL	O	3/2	M	Y	3/17/97	A-7	M	MATX	U	m	m	LOS	Y	Y	U	U						U	L	H	N	L
33 S	03 E	19	B	0.5	ASC	BL	O	3/2	M	N	3/17/97	A-6	M	MATX	U	m	m	LOS	Y	Y	U	U						U	L	H	N	L
33 S	03 E	19.01	A	0.89	NAT	BL	O	3/2	I	N	3/17/97	A-6	L	MATX	U	m	h	LOS	Y	Y	U	U						U	L	H	N	L
33 S	03 E	19.01	B	0.28	NAT	PV	O	3/2	M	Y	3/17/97	A-6	L	MATX	U	m	h	LOS	Y	Y	U	U						U	L	H	N	L
33 S	03 E	19.02		1.04	ABC	BL	O	3/2	M	Y	3/17/97	A-6	L	MATX	U	m	h	LOS	Y	Y	U	U						U	L	H	N	L
33 S	03 E	19.03	A	0.46	ABC	BL	O	3/2	M	Y	3/17/97	A-6	L	MATX	U	m	m	LOS	P	Y	U	U						U	L	H	N	L
33 S	03 E	19.03	B	0.34	NAT	BL	O	3/2	M	Y	3/17/97	A-6	L	MATX	U	m	h	LOS	P	Y	U	U						U	L	H	N	L
33 S	03 E	19.04	A	1.11	ABC	BL	T	3/1	M	Y	3/17/97	A-6	L	MATX	U	m	m	LOS	Y	Y	U	U						U	L	H	N	L
33 S	03 E	19.04	B	0.51	ASC	BL	T	3/1	M	Y	3/17/97	A-6	L	MATX	U	m	m	LOS	Y	Y	U	U						U	L	H	N	L
33 S	03 E	20	A	1.27	ASC	BL	T	3/1	M	Y	3/17/97	A-6	L	MAT	U	m	m	LOS	P	Y	U	U						U	L	H	N	L
33 S	03 E	28	A	0.29	PRR	PV	O	3/2	M	Y	3/17/97	A-7	L	CONN	U	m	m	LOS	Y	Y	U	U						U	L	H	N	L
33 S	03 E	28	B	2.16	PRR	BL	O	3/2	M	Y	3/17/97	A-7	L	CONN	U	m	m	LOS	Y	Y	U	U						U	L	H	N	L
33 S	03 E	28	C	0.23	PRR	PV	O	3/2	M	Y	3/17/97	A-7	L	MATX	U	m	m	LOS	Y	Y	U	U						U	L	H	N	L
33 S	03 E	28	D	0.58	PRR	BL	O	3/2	M	Y	3/17/97	A-7	L	MATX	U	m	m	LOS	Y	Y	U	U						U	L	H	N	L
33 S	03 E	28	E1	0.7	PRR	BL	O	3/2	M	Y	3/17/97	A-7	L	MAT	U	m	m	LOS	Y	Y	U	U						U	L	H	N	L
33 S	03 E	28	E2	0.69	ABC	BL	O	3/2	M	Y	3/17/97	A-7	L	MAT	U	m	m	LOS	Y	Y	U	U						U	L	H	N	L
33 S	03 E	28	F	0.8	PRR	PV	O	3/2	M	Y	3/17/97	A-7	L	MAT	U	m	m	LOS	Y	Y	U	U						U	L	H	N	L
33 S	03 E	28.01	A1	2.25	ASC	PB	O	3/2	M	Y	3/17/97	A-7	M	MATX	U	m	m	LOS	Y	Y	U	U						U	L	H	N	L
33 S	03 E	28.01	A2	0.06	ASC	PB	O	3/2	M	Y	3/17/97	A-7	M	MATX	U	m	m	LOS	Y	Y	U	U						U	L	H	N	L
33 S	03 E	28.01	B	0.59	ASC	BL	O	3/2	M	Y	3/17/97	A-7	M	MATX	U	m	m	LOS	Y	Y	U	U						U	L	H	N	L
33 S	03 E	28.01	C	0.11	ASC	BL	O	3/2	M	Y	3/17/97	A-7	M	MATX	U	m	m	LOS	Y	Y	U	U						U	L	H	N	L
33 S	03 E	28.02	A	0.64	PRR	PV	O	3/2	M	Y	3/17/97	A-7	L	MATX	U	m	m	LOS	Y	Y	U	U						U	L	H	N	L
33 S	03 E	28.02	B	1.56	PRR	PV	O	3/2	M	Y	3/17/97	A-7	L	MATX	U	m	m	LOS	Y	Y	U	U						U	L	H	N	L
33 S	03 E	28.03	A	0.6	PRR	PV	O	3/2	M	Y	3/17/97	A-7	L	MATX	U	m	m	LOS	Y	Y	U	U						U	L	H	N	L
33 S	03 E	29	A	0.11	NAT	BL	T	3/2	I	N	3/17/97	A-6	L	CONN	U	m	h	LOS	Y	Y	U	U						U	L	H	N	L
33 S	03 E	29	B	0.28	NAT	PV	O	3/2	M	Y	3/17/97	A-6	L	CONN	U	m	h	LOS	P	Y	U	U						U	L	H	N	L
33 S	03 E	29	C	0.48	NAT	BL	T	3/2	I	Y	3/17/97	A-6	L	CONN	U	m	h	LOS	P	Y	U	U						U	L	H	N	L
33 S	03 E	29.01		0.52	NAT	BL	T	3/1	D	N	3/17/97	A-6	L	CONN	U	m	h	LOS	N	Y	U	U						U	L	H	N	L
33 S	03 E	29.02		0.3	NAT	BL	T	3/1	D	N	3/17/97	A-6	L	CONN	U	m	h	LOS	P	Y	U	U						U	L	H	N	L
33 S	03 E	29.03		0.13	NAT	BL	T	3/1	D	N	3/17/97	A-6	L	CONN	U	m	h	LOS	P	Y	U	U						U	L	M	N	L
33 S	03 E	30		1.1	ABC	BL	O	3/2	M	Y	3/17/97	A-6	L	MATX	U	I	m	LOS	P	Y	U	U						U	L	M	N	L
33 S	03 E	30.01		0.51	ABC	BL	O	3/2	M	Y	3/17/97	A-7	L	MATX	U	I	m	LOS	Y	Y	U	U						U	L	H	N	L
33 S	03 E	31		0.51	PRR	PV	O	3/2	M	Y	3/17/97	A-7	L	MATX	U	I	m	LOS	Y	Y	U	U						U	L	H	N	L
33 S	03 E	31.01		0.57	PRR	BL	O	3/2	M	Y	3/17/97	A-7	L	MAT	U	m	m	LOS	P	Y	U	U						U	L	H	N	L
33 S	03 E	31.02		0.4	ABC	BL	T	3/2	N	N	3/17/97	A-7	L	MAT	U	m	m	LOS	N	Y	U	U						U	L	L	N	L
33 S	03 E	31.03		0.8	ABC	BL	O	3/2	M	Y	3/17/97	A-7	L	MAT	U	m	m	LOS	Y	Y	U	U						U	L	H	N	L
33 S	03 E	31.04		0.9	ABC	BL	O	3/2	M	Y	3/17/97	A-7	L	MAT	U	I	m	LOS	Y	Y	U	U						U	L	H	N	L
33 S	03 E	31.05		0.57	NAT	BL	T	3/1	D	N	3/17/97	A-7	L	MATX	U	m	h	LOS	N	Y	U	U						U	L	L	N	L
33 S	03 E	31.06		0.55	NAT	BL	O	3/2	M	N	3/17/97	A-7	L	MATX	U	m	h	LOS	Y	Y	U	U						U	L	M	N	L
33 S	03 E	32		0.7	PRR	BL	T	3/1	M	N	3/17/97	A-6	L	MAT	Y	m	m	LOS	P	Y	Y	U						N	L	H	N	L
33 S	03 E	33		0.33	ABC	BL	O	3/2	M	Y	3/17/97	A-6	L	MATX	U	I	m	LOS	N	Y	U	U						U	L	M	N	L
33 S	03 E	33.01		0.7	ABC	BL	O	3/2	M	Y	3/17/97	A-6	L	MATX	U	I	m	LOS	Y	Y	U	U						U	L	H	N	L
33 S	03 E	33.02		0.32	NAT	BL	D	3/1	D	N	3/17/97	A-6	L	MATX	U	m	h	LOS	P	Y	U	U						U	L	H	N	L
33 S	03 E	34	A1	1.12	ASC	PB	O	3/2	M	Y	3/17/97	A-6	L	MATX	U	I	m	LOS	Y	Y	U	U						U	L	H	N	L
33 S	03 E	34	A2	0.7	ASC	PB	O	3/2	M	Y	3/17/97	A-6	L	MATX	U	m	m	LOS	Y	Y	U	U						U	L	H	N	L
33 S	03 E	34	B1	6.34	ABC	PV	O	3/2	M	Y	3/17/97	A-6	L	MATX	U	m	m	LOS	Y	Y	U	U						U	L	H	N	L
33 S	03 E	34	B2	1.51	ABC		O	3/2	M	Y	3/17/97	A-6	L	MATX	U	m	m	LOS	Y	Y	U	U						U	L	H	N	L
33 S	03 E	34.01	A	0.33	NAT	PV	O	3/2	M	Y	3/17/97	A-6	L	MATX	U	m	m	LOS	Y	Y	U	U						U	L	H	N	L
33 S	03 E	34.01	B	0.5	ABC	BL	O	3/2	M	Y	3/17/97	A-6	L	MATX	U	m	m	LOS	Y	Y	U	U						U	L	H	N	L
33 S	03 E	34.01	C	0.61	ABC	PV	D	3/1	D	N	3/17/97	A-6	L	MATX	U	I	m	LOS	Y	Y	U	U						U	L	H	N	L
33 S	03 E	34.01	D	0.23	ABC	BL	D	3/1	D	N	3/17/97	A-6	L	MATX	U	m	m	LOS	Y	Y	U	U						U	L	H	N	L
33 S	03 E	34.01	E	0.04	NAT	BL	O	3/2	M	Y	3/17/97	A-6	L	MATX	U	m	h	LOS	Y	Y	U	U						U	L	H	N	L
33 S	03 E	35	A	1.58	SRN	PV	O	3/2	M	Y	3/17/97	A-6	L	MATX	U	I	m	LOS	Y	Y	U	U						U	L	H	N	L
33 S	03 E	35	B	0.11	SRN	BL	O	3/2	M	Y	3/17/97	A-6	L	MATX	U	I	m	LOS	Y	Y	U	U						U	L	H	N	L
33 S	03 E	35	C	1.28	NAT	BL	O	3/2	M	Y	3/17/97	A-6	L	MATX	U	I	m	LOS	Y	Y	U	U						U	L	H	N	L
33 S	03 E	35	D	0.54	NAT	BL	D	3/1	D	N	3/17/97	A-6	L	MATX	U	I	m	LOS	P	Y	U	U						U	L	H	N	L
34 S	02 E	01		1.6	NAT	BL	O	3/2	M	Y	3/17/97	A-6	L	MATX	U	m	m	LOS	Y	Y	U	U						U	L	H	N	L
34 S	02 E	2	A	1.07	ABC	BL	T	3/1	D	N	3/17/97	A-6	L	MATX	U	m	m	LOS	P	Y	U	U						U	L	H	N	L
34 S	02 E	2	B	1.62	ASC	BL	T	3/1	D	N	3/17/97	A-6	L	MAT	U	m	m	LOS	P	Y	U	U						U	L	H	N	L
34 S	02 E	2.01	A	1.18	ABC	BL	O	3/2	M	Y	3/17/97	A-6	L	MAT	U	m	m	LOS	P	Y	U	U						U	L	H	N	L

TRANSPORTATION OBJECTIVES FOR WATERSHED ANALYSIS UNIT: LOST CREEK

ROAD NO				ATTRIBUTES: LENGTH	SURFACE	CONTROL	RECOMMENDED MANAGEMENT ACTIONS: ACCESS	MMS LEVEL	STANDARD	TIMS TMO CONCURRENCE	TMO DATE	PHYSICAL DATA: AASHTO	AVE DAILY TRAFFIC	FOREST MGMT AREA	5% GRADE	SLOPE INSTABILITY	EROSION POTENTIAL	WATERSHED	ROAD USE CONSTRAINTS: ACCESS TO PRIVATE	BDK LOADS	LARGE FILL CMPS	NOXIOUS WEEDS	SPECIAL STAT PLANTS	WATER QUALITY	WILDLIFE	IDENTIFIED ROAD USE: COMM SITE	FIRE	FISHERIES	QUARRY ACCESS	RECREATION	REFORESTATION	RESIDENTIAL ACCESS	TIMBER	WILDLIFE
34 S	02 E	2.01	B	0.83	ABC	BL	O	3/2	M	Y	3/17/97	A-6	L	MAT	U	m	m	LOS	P	Y	U	U							U	L	H	N		L
34 S	02 E	4		1.25	PRR	PV	O	3/2	M	Y	3/17/97	A-6	L	MAT	U	m	m	LOS	Y	Y	U	U							U	L	H	N		L
34 S	02 E	4.01		1.46	ABC	PV	O	3/2	M	Y	3/17/97	A-6	L	MAT	U	m	h	LOS	Y	Y	U	U							U	L	H	N		L
34 S	02 E	4.02	A	0.76	NAT	BL	T	3/1	D	N	3/17/97	A-6	L	MAT	U	m	h	LOS	Y	Y	U	U							U	L	M	N		L
34 S	02 E	4.02	B	0.68	NAT	PV	O	3/2	M	Y	3/17/97	A-6	L	MAT	U	m	m	LOS	Y	Y	U	U							U	L	M	N		L
34 S	02 E	4.03		0.64	PRR	PV	O	3/2	M	Y	3/17/97	A-6	L	MAT	U	m	m	LOS	Y	Y	U	U							U	L	L	N		L
34 S	02 E	4.04		0.09	ASC	PV	O	3/2	M	Y	3/17/97	A-6	L	MAT	U	m	m	LOS	Y	Y	U	U							U	L	H	N		L
34 S	02 E	6		0.26	PRR	PV	O	3/2	M	Y	3/17/97	A-6	L	MAT	U	l	m	LOS	Y	Y	U	U							U	L	L	N		L
34 S	02 E	6.03	A	0.61	NAT	PV	O	3/2	M	Y	3/17/97	A-6	L	MATX	U	m	h	LOS	Y	Y	U	U							U	L	H	N		L
34 S	02 E	6.03	B	0.71	NAT	PV	O	3/2	M	Y	3/17/97	A-6	L	MATX	U	m	m	LOS	Y	Y	U	U							U	L	H	N		L
34 S	02 E	8	B1	4.99	ABC	PV	O	3/2	M	Y	3/17/97	A-6	M	MATX	U	m	m	LOS	Y	Y	U	Y							U	L	H	N		L
34 S	02 E	8	B2	0.2	ASC	PB	O	3/2	M	Y	3/17/97	A-6	M	MATX	U	m	m	LOS	Y	Y	U	U							U	L	H	N		L
34 S	02 E	8	C1	3.71	ASC	PB	O	3/2	M	Y	3/17/97	A-6	M	MATX	U	m	m	LOS	Y	Y	U	U							U	L	H	N		L
34 S	02 E	8	C2	4.18	ASC	PB	O	3/2	M	Y	3/17/97	A-6	M	MATX	U	m	m	LOS	Y	Y	U	U							U	L	H	N		L
34 S	02 E	8	C3	2	ASC	PB	O	3/2	M	Y	3/17/97	A-6	M	MAT	U	m	m	LOS	Y	Y	U	U							U	L	H	N		L
34 S	02 E	8.01	B	2.23	ASC	PB	O	3/2	M	Y	3/17/97	A-7	M	MAT	U	l	m	LOS	Y	Y	U	U							U	L	H	N		L
34 S	02 E	8.01	C	1.23	ASC	BL	O	3/2	M	Y	3/17/97	A-7	M	MAT	U	l	m	LOS	Y	Y	U	U							U	L	H	N		L
34 S	02 E	8.02	E	1.56	ABC	PV	O	3/2	M	Y	3/17/97	A-7	L	MATX	U	l	m	LOS	Y	Y	U	U							U	L	H	N		L
34 S	02 E	29	C	0.47	ASC	BL	O	3/2	M	Y	3/17/97	A-7	L	MAT	U	m	h	LOS	Y	Y	U	U							U	L	H	N		L
34 S	03 E	1	A	0.22	NAT	PV	O	3/2	M	Y	3/17/97	A-6	L	MATX	U	m	h	LOS	Y	Y	U	U							U	L	L	N		L
34 S	03 E	1	B	0.25	NAT	BL	D	3/1	D	N	3/17/97	A-6	L	MATX	U	m	h	LOS	Y	Y	U	U							U	L	L	N		L
34 S	03 E	2		0.23	NAT	BL	D	3/1	D	N	3/17/97	A-6	L	MATX	U	m	h	LOS	P	Y	U	U					M		U	L	M	N		L
34 S	03 E	3	A	1.13	NAT	PV	O	3/2	M	Y	3/17/97	A-6	L	MATX	U	m	h	LOS	Y	Y	U	U					M		U	L	L	N		L
34 S	03 E	3	B	0.61	ABC	BL	O	3/2	M	Y	3/17/97	A-6	L	MATX	N	m	m	LOS	Y	Y	U	U					M		N	L	M	N		L
34 S	03 E	3.01		0.01	NAT	PV	O	3/2	M	Y	3/17/97	A-6	L	MATX	U	m	h	LOS	Y	Y	N	U							U	L	M	N		L
34 S	03 E	3.02	A	0.28	NAT	PV	T	3/1	M	Y	3/17/97	A-6	L	MATX	U	m	h	LOS	Y	Y	U	U			SN		M		U	L	M	N		L
34 S	03 E	4	A	0.6	NAT	BL	T	3/2	I	N	3/17/97	A-6	L	MAT	U	m	h	LOS	Y	Y	U	U			SH		M		U	L	M	N		L
34 S	03 E	4.02	A	0.02	NAT	PV	O	3/2	M	Y	3/17/97	A-6	L	MATX	U	m	h	LOS	Y	Y	U	U					M		U	L	L	N		L
34 S	03 E	4.02	B	1.32	NAT	PV	O	3/2	M	Y	3/17/97	A-6	L	MAT	U	m	h	LOS	Y	Y	U	U					M		U	L	L	N		L
34 S	03 E	4.03	A	1.08	NAT	PV	O	3/2	M	Y	3/17/97	A-6	L	MATX	U	m	h	LOS	Y	Y	U	U					M		U	L	L	N		L
34 S	03 E	4.03	B	0.27	NAT	BL	D	3/1	D	N	3/17/97	A-6	L	MATX	U	m	h	LOS	Y	Y	U	U					M		U	L	L	N		L
34 S	03 E	4.03	C	0.43	ABC	BL	O	3/2	M	Y	3/17/97	A-6	L	MATX	U	m	h	LOS	Y	Y	U	U					M		U	L	L	N		L
34 S	03 E	4.03	D	0.15	NAT	PV	O	3/2	M	Y	3/17/97	A-6	L	MATX	U	m	m	LOS	Y	Y	U	U					M		U	L	L	N		L
34 S	03 E	5		0.63	ABC	BL	O	3/2	M	Y	3/17/97	A-7	L	MAT	N	m	m	LOS	Y	Y	Y	U					M		N	L	H	N		L
34 S	03 E	5.01		0.31	ABC	BL	O	3/2	M	Y	3/17/97	A-7	L	MAT	N	m	m	LOS	N	Y	N	U					M		N	L	H	N		L
34 S	03 E	5.02		0.29	NAT	BL	D	3/1	D	N	3/17/97	A-7	L	MAT	N	m	h	LOS	N	Y	N	U					M		N	L	L	N		L
34 S	03 E	5.04		0.85	NAT	BL	D	3/1	D	N	3/17/97	A-7	L	MAT	Y	h	h	LOS	Y	Y	N	U					M		N	L	H	N		L
34 S	03 E	5.05		0.07	NAT	PV	O	3/2	M	Y	3/17/97	A-7	L	MAT	U	m	h	LOS	Y	Y	U	U							U	L	M	N		L
34 S	03 E	7		0.18	ABC	BL	O	3/2	M	Y	3/17/97	A-7	L	MAT	N	l	m	LOS	N	Y	N	U					M		N	L	H	N		L
34 S	03 E	7.01		1.43	ABC	BL	O	3/2	M	Y	3/17/97	A-7	L	CONN	U	m	m	LOS	Y	Y	U	U					M		U	L	H	N		L
34 S	03 E	7.02		0.68	ABC	BL	O	3/2	M	Y	3/17/97	A-7	L	CONN	U	m	m	LOS	N	Y	U	U					M		U	L	H	N		L
34 S	03 E	7.03		0.44	ABC	BL	D	3/1	D	N	3/17/97	A-7	L	CONN	N	l	m	LOS	P	Y	N	U					M		N	L	L	N		L
34 S	03 E	7.04		1.19	ABC	BL	D	3/1	D	N	3/17/97	A-7	L	CONN	N	m	m	LOS	P	Y	Y	U					H		N	L	H	N		L
34 S	03 E	9	A	0.43	PRR	BL	O	3/2	M	Y	3/17/97	A-6	M	MAT	N	m	m	LOS	Y	Y	Y	U					M		N	L	H	N		L
34 S	03 E	9	B	0.19	ASC	BL	O	3/2	M	Y	3/17/97	A-6	M	MAT	N	m	m	LOS	Y	Y	Y	U					M		N	L	H	N		L
34 S	03 E	9	C	0.38	ASC	PB	O	3/2	M	Y	3/17/97	A-6	M	MAT	N	m	m	LOS	Y	Y	Y	U					M		N	L	H	N		L
34 S	03 E	9	D	0.34	ASC	PB	O	3/2	M	Y	3/17/97	A-6	L	MAT	N	m	m	LOS	Y	Y	N	U					M		N	L	H	N		L
34 S	03 E	9	E	1.46	ABC	BL	O	3/2	M	Y	3/17/97	A-6	L	MAT	N	m	m	LOS	Y	Y	Y	U					M		N	L	H	N		L
34 S	03 E	9	F	1.13	ASC	BL	O	3/2	M	Y	3/17/97	A-6	L	MAT	Y	m	m	LOS	Y	Y	N	U					M		N	L	H	N		L
34 S	03 E	9.01	A	0.24	NAT	PV	O	3/2	M	Y	3/17/97	A-6	L	MAT	U	m	h	LOS	Y	Y	U	U					M		U	L	H	N		L
34 S	03 E	9.01	B	0.52	NAT	BL	D	3/1	D	N	3/17/97	A-6	L	MAT	U	m	h	LOS	Y	Y	U	U					M		U	L	L	N		L
34 S	03 E	9.02	A	1.78	NAT	BL	D	3/1	D	N	3/17/97	A-6	L	MAT	Y	m	h	LOS	P	Y	Y	U					M		N	L	L	N		L
34 S	03 E	9.02	B	0.35	NAT	BL	D	3/1	D	N	3/17/97	A-6	L	MAT	Y	h	h	LOS	P	Y	Y	U					M		N	L	L	N		L
34 S	03 E	9.02	C	0.45	NAT	BL	D	3/1	D	N	3/17/97	A-6	L	MAT	U	m	h	LOS	P	Y	U	U					M		N	L	H	N		L
34 S	03 E	9.03	A	0.15	ABC	BL	O	3/2	M	Y	3/17/97	A-6	L	MAT	N	m	m	LOS	Y	Y	N	U					M		Y	L	L	N		L
34 S	03 E	9.03	B	0.21	NAT	BL	D	3/1	O	N	3/17/97	A-6	L	MAT	N	m	h	[illegible]	Y	Y	N	U					M		Y	L	L	N		L
34 S	03 E	9.03	C	0.8	NAT	PV	O	3/2	M	Y	3/17/97	A-6	L	MAT	U	m	h	[illegible]	Y	Y	U	U					M		U	L	L	N		L
34 S	03 E	10.01	A	0.13	NAT	PV	O	3/2	M	Y	3/17/97	A-6	L	MAT	U	m	h	LOS	Y	Y	U	U					M		U	L	L	N		L
34 S	03 E	10.01	B	0.41	NAT	BL	O	3/2	M	Y	3/17/97	A-6	L	MAT	U	m	h	[illegible]	Y	Y	U	U					M		U	L	L	N		L
34 S	03 E	10.01	C	0.24	NAT	PV	O	3/2	M	Y	3/17/97	A-6	L	MAT	U	m	h	[illegible]	Y	Y	U	U					M		U	L	L	N		L
34 S	03 E	10.01	D	0.45	NAT	BL	[illegible]	[illegible]	[illegible]	N	[illegible]	A-6	[illegible]	MAT	U	m	h	[illegible]	Y	[illegible]	[illegible]	U					M		U	L	L	N		L

TRANSPORTATION OBJECTIVES FOR WATERSHED ANALYSIS UNIT: LOST CREEK

ROAD NO.				ATTRIBUTES			RECOMMENDED MANAGEMENT ACTIONS					PHYSICAL DATA							ROAD USE CONSTRAINTS							IDENTIFIED ROAD USE								
				LENGTH	SURFACE	CONTROL	ACCESS	MMS LEVEL	STANDARD	TIMS/TMO CONCURRENCE	TMO DATE	AASHTO	AVE DAILY TRAFFIC	FOREST MGMT AREA	% GRADE	SLOPE INSTABILITY	EROSION POTENTIAL	WATERSHED	ACCESS TO PRIVATE	BOX LOADS	LARGE FILL/CMPS	NOXIOUS WEEDS	SPECIAL STAT PLANTS	WATER QUALITY	WILDLIFE	COMM SITE	FIRE	FISHERIES	QUARRY ACCESS	RECREATION	REFORESTATION	RESIDENTIAL ACCESS	TIMBER	WILDLIFE
34 S	03 E	10.01	E	0.21	NAT	BL	D	3/1	D	N	3/17/97	A-6	L	MAT	U	m	h	LOS	Y	Y	U	U					M		U	L	L	N		L
34 S	03 E	11	A	0.38	NAT	BL	O	3/2	M	Y	3/17/97	A-6	L	MATX	U	m	h	LOS	Y	Y	U	U					M		U	L	M	N		L
34 S	03 E	11	B	0.06	NAT	PV	O	3/2	M	Y	3/17/97	A-6	L	MATX	U	m	h	LOS	Y	Y	U	U					M		U	L	M	N		L
34 S	03 E	11.01	A	0.5	NAT	BL	T	3/1	D	N	3/17/97	A-6	L	MATX	U	m	h	LOS	Y	Y	U	U					M		U	L	M	N		L
34 S	03 E	11.02	A	0.1	NAT	PV	O	3/2	M	Y	3/17/97	A-6	L	MATX	U	m	h	LOS	Y	Y	U	U					M		U	L	M	N		L
34 S	03 E	11.02	B	0.17	ASC	BL	O	3/2	I	Y	3/17/97	A-6	L	MATX	U	I	m	LOS	Y	Y	U	U							U	L	M	N		L
34 S	03 E	11.02	C	0.1	NAT	BL	O	3/2	I	Y	3/17/97	A-6	L	MATX	U	m	h	LOS	Y	Y	U	U							U	L	H	N		L
34 S	03 E	12	A	0.09	ASC	BL	O	3/2	M	Y	3/17/97	A-6	L	MATX	U	I	m	LOS	Y	Y	U	U					M		U	L	H	N		L
34 S	03 E	12	B	0.15	ASC	PB	O	3/2	M	Y	3/17/97	A-6	L	MATX	U	I	m	LOS	Y	Y	U	U					M		U	L	H	N		L
34 S	03 E	12	C	0.48	ASC	BL	O	3/2	M	Y	3/17/97	A-6	L	MATX	U	I	m	LOS	Y	Y	U	U					M		U	L	H	N		L
34 S	03 E	12.02		0.44	ASC	BL	D	3/1	D	N	3/17/97	A-6	L	MATX	U	I	m	LOS	N	Y	U	U					M		U	L	L	N		L
34 S	03 E	12.05		0.14	ASC	BL	D	3/1	D	N	3/17/97	A-6	L	MATX	U	I	m	LOS	Y	Y	U	U							U	L	L	N		L
34 S	03 E	12.06		0.04	NAT	BL	D	3/1	D	N	3/17/97	A-6	L	MATX	U	I	m	LOS	Y	Y	U	U							U	L	L	N		L
34 S	03 E	15.01	B	0.28	ASC	BL	O	3/2	M	Y	3/17/97	A-6	L	MAT	U	I	m	LOS	Y	Y	U	U							U	L	M	Y		L
34 S	03 E	15.01	C	1.74	NAT	PV	O	3/2	M	Y	3/17/97	A-6	L	MAT	U	m	h	LOS	Y	Y	U	U							U	L	M	Y		L
34 S	03 E	15.02	A	0.3	ABC	PV	O	3/2	M	Y	3/17/97	A-6	L	MAT	U	I	m	LOS	Y	Y	U	U					M		U	L	M	N		L
34 S	03 E	15.02	B	0.31	ABC	BL	O	3/2	M	Y	3/17/97	A-6	L	MAT	U	I	m	LOS	Y	Y	U	U					M		U	L	M	N		L
34 S	03 E	17	A	0.82	NAT	PV	O	3/2	M	Y	3/17/97	A-6	L		U	m	h	LOS	Y	Y	U	U							U	L	L	N		L
34 S	03 E	17	B	0.06	NAT	BL	O	3/2	M	Y	3/17/97	A-6	L		U	m	h	LOS	Y	Y	U	U							U	L	L	N		L

TRANSPORTATION OBJECTIVES FOR WATERSHED ANALYSIS, LOST CREEK

ROAD NO.				REMARKS
32 S	01 E	13	F	SPOT ROCK STREAM CROSSING
32 S	01 E	35	A	JAC MA
32 S	01 E	35.01		
32 S	01 E	35.02	B	CONSIDER DECOMMISSIONING THIS ROAD; CHECK R/W AGREEMENT
32 S	01 E	35.04		Blocked and partially overgrown; CONSIDER DECOMMISSIONING THIS ROAD; CHECK R/W AGREEMENT
32 S	01 E	35.05		CONSIDER DECOMMISSIONING THIS ROAD; CHECK R/W AGREEMENT
32 S	01 E	35.06		BLOCK W LOG; CONSIDER DECOMMISSIONING THIS ROAD; CHECK R/W AGREEMENT
32 S	01 E	35.07		CONSIDER DECOMMISSIONING THIS ROAD; CHECK R/W AGREEMENT
32 S	01 E	36	A2	
32 S	02 E	33	A	CONSIDER DECOMMISSIONING THIS ROAD; CHECK R/W AGREEMENT; KEEP OPEN SECTION OF THIS SEGMENT TO QUARRY SITE
32 S	02 E	33	B	CONSIDER DECOMMISSIONING THIS ROAD; CHECK R/W AGREEMENT
32 S	02 E	33.01		CURRENTLY HAS LOG BLOCK; CONSIDER DECOMMISSIONING THIS ROAD; CHECK R/W AGREEMENT
32 S	02 E	33.02		LIMIT ACCESS
32 S	02 E	34	A	Access to Flounce Rock ACEC and EE area. Self guided tour route segments A-F
32 S	02 E	34	B	Access to Flounce Rock ACEC and EE area. Self guided tour route segments A-F
32 S	02 E	34	C	Access to Flounce Rock ACEC and EE area. Self guided tour route segments A-F
32 S	02 E	34	D	Access to Flounce Rock ACEC and EE area. Self guided tour route segments A-F
32 S	02 E	34	E	Access to Flounce Rock ACEC and EE area. Self guided tour route segments A-F
32 S	02 E	34	F	Access to Flounce Rock ACEC and EE area. Self guided tour route segments A-F
33 S	01 E	2	A2	GATED FOR EROSION CONTROL
33 S	01 E	2	B	GATED FOR EROSION CONTROL
33 S	01 E	2	C	GATED FOR EROSION CONTROL
33 S	01 E	2	D	GATED FOR EROSION CONTROL
33 S	01 E	2	E	GATED FOR EROSION CONTROL
33 S	01 E	3		Naturally decommissioned
33 S	01 E	11		
33 S	01 E	11.01		Powerline road; gate installed at east end; gate to be installed in Sec. 12.
33 S	01 E	11.02		
33 S	01 E	14.01	B	GATED; IMPROVE DRAINAGE
33 S	01 E	14.01	C	GATED; IMPROVE DRAINAGE
33 S	01 E	14.01	D	GATED; IMPROVE DRAINAGE
33 S	01 E	14.02		INSTALL GATE; CUT OFF TIE BY INSTALLING LOG/EARTH BARRICADE.
33 S	01 E	15		actively eroding; CONSIDER DECOMMISSIONING THIS ROAD; CHECK R/W AGREEMENT
33 S	01 E	22.01		
33 S	01 E	23	A1	Gated by the Corps. Access to Four Corners Camp for maintenance.
33 S	01 E	23	A2	IMPROVE DRAINAGE BEYOND THE PARKING AREA.
33 S	01 E	25		LAURELHURST ACCESS ROAD
33 S	01 E	25.01	A	TIE ROAD
33 S	01 E	25.01	B	TIE ROAD
33 S	01 E	27	B	seeps and springs on cutbank, rec access to lake, Burnt Peak Road.
33 S	01 E	27	C	fillslope settling, rec access to lake; Burnt Peak Road.
33 S	01 E	27	D	missed opportunity for culvert, rec access to lake; Burnt Peak Road.
33 S	01 E	27	E	rec access to lake; Burnt Peak Road.
33 S	01 E	27	F	rec access to lake; Burnt Peak Road.
33 S	01 E	27	G	rec access to lake. Burnt Peak Road.
33 S	01 E	27	H	
33 S	01 E	27	I	
33 S	01 E	27	J	
33 S	01 E	27	K	
33 S	01 E	27	L	
33 S	01 E	27	M	
33 S	01 E	27	N	
33 S	01 E	27	O	
33 S	01 E	35		GATED
33 S	01 E	35.01		CONSIDER DECOMMISSIONING THIS ROAD. CHECK R/W AGREEMENT
33 S	01 E	36	A	TIE ROAD
33 S	01 E	36.01		
33 S	01 E	36.02	A	
33 S	01 E	36.02	B	ALREADY GATED W CORPS
33 S	02 E	5	A	CONSIDER DECOMMISSIONING THIS ROAD. CHECK R/W AGREEMENT
33 S	02 E	5	B	CONSIDER DECOMMISSIONING THIS ROAD. CHECK R/W AGREEMENT

TRANSPORTATION OBJECTIVES FOR WATERSHED ANALYSIS: LOST CREEK

ROAD NO				REMARKS
33 S	02 E	27.07	A	
33 S	02 E	27.08		DECOMMISSION
33 S	02 E	28	A	REVIEW IMPOVEMENT
33 S	02 E	28	B	DECOMMISSION
33 S	02 E	28.01		
33 S	02 E	28.02		
33 S	02 E	29		
33 S	02 E	29.01		
33 S	02 E	29.02		
33 S	02 E	29.03		
33 S	02 E	29.04		
33 S	02 E	31	A	
33 S	02 E	31	B	
33 S	02 E	31	C	
33 S	02 E	31	D	
33 S	02 E	31.01		HAS GUARDRAIL; OSPREY NEST
33 S	02 E	31.02	A	
33 S	02 E	31.02	B	
33 S	02 E	31.03		CHECK ROAD
33 S	02 E	31.04	A	
33 S	02 E	31.04	B	
33 S	02 E	31.05	A	BLOCK AFTER PUMP CHANCE
33 S	02 E	31.06		EXISTING BLOCK; EAGLE'S NEST
33 S	02 E	31.07		
33 S	02 E	32		INSTALL GATE
33 S	02 E	32.01	A	
33 S	02 E	32.01	B	
33 S	02 E	32.02		
33 S	02 E	32.03		
33 S	02 E	32.04		
33 S	02 E	32.05		
33 S	02 E	33	A	"B" ROAD
33 S	02 E	33	B	"B" ROAD
33 S	02 E	33	C	"B" ROAD
33 S	02 E	33.01	A	CURRENTLY BLOCKED; BLM ROAD WITH PVT CAPITAL IMPROVEMENT
33 S	02 E	33.01	B	GUARDRAIL REMOVED; BLOCK AT SECTION LINE; DECOMMISSION ROAD
33 S	02 E	33.02	A	
33 S	02 E	33.02	B	
33 S	02 E	33.03		GUARDRAIL INSTALLED
33 S	02 E	33.04		
33 S	02 E	33.05		
33 S	02 E	34	A	
33 S	02 E	34.01		
33 S	02 E	34.02		
33 S	02 E	34.03	A	
33 S	02 E	34.03	B	
33 S	02 E	34.04		
33 S	02 E	35		BLOCK BOTH ENDS
33 S	02 E	35.01		
33 S	02 E	35.02	A	
33 S	02 E	35.02	B	
33 S	02 E	35.02	C	
33 S	02 E	35.02	D	
33 S	02 E	35.03		EXISTING GUARDRAIL; DECOMMISSIONED BY PREVIOUS BRUSH PILING
33 S	02 E	35.04		EXISTING LOG BLOCK BEING BYPASSED; IMPROVE BLOCK
33 S	02 E	35.05	A	
33 S	02 E	35.05	B	
33 S	02 E	36.01	A	
33 S	02 E	36.02		
33 S	03 E	18		OWL CORE; NEED BLOCK
33 S	03 E	18.01	A	GUARDRAIL INSTALLED

TRANSPORTATION OBJECTIVES FOR WATERSHED ANALYSIS: LOST CREEK

ROAD NO.				REMARKS
33 S	02 E	5.01	__	GUARD RAIL INSTALLED; CHECK CONDITION.
33 S	02 E	13	A1	
33 S	02 E	13	A2	DRAINAGE MAINTENANCE NEEDED
33 S	02 E	13	B	
33 S	02 E	13.01	A	
33 S	02 E	13.01	B	
33 S	02 E	13.02	A	
33 S	02 E	13.02	B	
33 S	02 E	13.03	A	
33 S	02 E	13.04	__	INSTALL GUARD RAIL
33 S	02 E	13.05	__	EXISTING BLOCK
33 S	02 E	14	A	OPPORTUNITY FOR SPOT ROCKING
33 S	02 E	14	B	OPPORTUNITY FOR SPOT ROCKING; ABOUT 600 FEET OF THIS SEGMENT TO BE DECOMMISSIONED
33 S	02 E	14	C	OPPORTUNITY FOR SPOT ROCKING
33 S	02 E	14	D	OPPORTUNITY FOR SPOT ROCKING
33 S	02 E	14.01	__	PROPOSE DECOMMISSION AFTER FIELD TRIP
33 S	02 E	14.02	__	
33 S	02 E	14.03	__	
33 S	02 E	15	A	
33 S	02 E	15	B	
33 S	02 E	15	C	
33 S	02 E	15.01	A	
33 S	02 E	15.01	B	
33 S	02 E	19	__	CORPS HAS BLOCKED; Seth Bullis- future recreation site.
33 S	02 E	20	__	MEDITE HAS GATED
33 S	02 E	21	__	
33 S	02 E	22	A	
33 S	02 E	22	B	INSTALL CULVERT
33 S	02 E	22.01	A	POOR CONDITION; IMPROVE DRAINAGE
33 S	02 E	22.01	B	
33 S	02 E	22.02	__	
33 S	02 E	22.03	__	
33 S	02 E	22.04	A1	
33 S	02 E	22.04	A2	
33 S	02 E	22.05	__	IMPROVE DRAINAGE & DECOMMISSION AFTER USE
33 S	02 E	22.06	A	
33 S	02 E	22.07	__	
33 S	02 E	22.08	__	
33 S	02 E	23	__	PROPOSED DECOMMISSION AFTER FIELD TRIP
33 S	02 E	23.01	__	PROPOSED DECOMMISSION AFTER FIELD TRIP
33 S	02 E	24	__	
33 S	02 E	24.01	__	
33 S	02 E	24.02	__	
33 S	02 E	25	A	DECOMMISSION AFTER USE
33 S	02 E	25	B	
33 S	02 E	25.01	__	HAS GUARDRAIL
33 S	02 E	25.02	A	IMPROVE DRAINAGE?
33 S	02 E	25.02	B	IMPROVE DRAINAGE?
33 S	02 E	25.03	__	ROAD TO QUARRY SITE
33 S	02 E	26	A	
33 S	02 E	26	B	
33 S	02 E	27	A	
33 S	02 E	27	B	
33 S	02 E	27.01	A	
33 S	02 E	27.01	B	
33 S	02 E	27.01	C	
33 S	02 E	27.02	__	GUARD RAIL
33 S	02 E	27.03	__	NEEDS LOG, GUARD RAIL, OR GATE
33 S	02 E	27.04	__	needs log, earthen block not functioning DECOMMISSION AFTER USE?
33 S	02 E	27.05	__	needs log, earthen block not functioning DECOMMISSION AFTER USE?
33 S	02 E	27.06	__	OPEN

TRANSPORTATION OBJECTIVES FOR WATERSHED ANALYSIS: LOST CREEK

ROAD NO				REMARKS
33 S	03 E	19	A1	"B" ROAD
33 S	03 E	19	A2	"B" ROAD
33 S	03 E	19	B	"B" ROAD
33 S	03 E	19.01	A	IMPROVE? FIELD CHECK
33 S	03 E	19.01	B	
33 S	03 E	19.02		
33 S	03 E	19.03	A	
33 S	03 E	19.03	B	
33 S	03 E	19.04	A	BEHIND 14 STINGS GATE
33 S	03 E	19.04	B	BEHIND 14 STINGS GATE
33 S	03 E	20	A	14 STINGS GATE; BEHIND GATE
33 S	03 E	28	A	
33 S	03 E	28	B	
33 S	03 E	28	C	
33 S	03 E	28	D	
33 S	03 E	28	E1	
33 S	03 E	28	E2	
33 S	03 E	28	F	
33 S	03 E	28.01	A1	
33 S	03 E	28.01	A2	
33 S	03 E	28.01	B	
33 S	03 E	28.01	C	
33 S	03 E	28.02	A	
33 S	03 E	28.02	B	
33 S	03 E	28.03	A	
33 S	03 E	29	A	HAD GUARDRAIL; REPAIR GUARDRAIL
33 S	03 E	29	B	HAD GUARDRAIL; REPAIR GUARDRAIL
33 S	03 E	29	C	BEHIND RAIL
33 S	03 E	29.01		BEHIND RAIL
33 S	03 E	29.02		
33 S	03 E	29.03		BEHIND RAIL
33 S	03 E	30		
33 S	03 E	30.01		
33 S	03 E	31		
33 S	03 E	31.01		
33 S	03 E	31.02		EXISTING GUARDRAIL
33 S	03 E	31.03		
33 S	03 E	31.04		
33 S	03 E	31.05		BLOCK WITH RAIL
33 S	03 E	31.06		YES
33 S	03 E	32		INSTALL GATE
33 S	03 E	33		
33 S	03 E	33.01		
33 S	03 E	33.02		DECOMMISSION
33 S	03 E	34	A1	"A" ROAD
33 S	03 E	34	A2	"A" ROAD
33 S	03 E	34	B1	"A" ROAD
33 S	03 E	34	B2	"A" ROAD
33 S	03 E	34.01	A	
33 S	03 E	34.01	B	
33 S	03 E	34.01	C	USED TO BE BLOCKED; CHECK & BLOCK BOTH ENDS
33 S	03 E	34.01	D	
33 S	03 E	34.01	E	
33 S	03 E	35	A	
33 S	03 E	35	B	
33 S	03 E	35	C	
33 S	03 E	35	D	CONSIDER DECOMMISSIONING THIS SEGMENT
34 S	02 E	1.01		USFS ROAD
34 S	02 E	2	A	BLOCK
34 S	02 E	2	B	BLOCK
34 S	02 E	2.01	A	KEEP OPEN

TRANSPORTATION OBJECTIVES FOR WATERSHED ANALYSIS: LOST CREEK

ROAD NO.				REMARKS
34 S	02 E	2.01	B	KEEP OPEN
34 S	02 E	4		
34 S	02 E	4.01		
34 S	02 E	4.02	A	2 BLOCKS AT PROPERTY LINE: STEEP GRADE.
34 S	02 E	4.02	B	
34 S	02 E	4.03		
34 S	02 E	4.04		
34 S	02 E	6		
34 S	02 E	6.03	A	
34 S	02 E	6.03	B	
34 S	02 E	8	B1	"A" ROAD
34 S	02 E	8	B2	"A" ROAD
34 S	02 E	8	C1	"A" ROAD
34 S	02 E	8	C2	"A" ROAD
34 S	02 E	8	C3	"A" ROAD
34 S	02 E	8.01	B	"B" ROAD
34 S	02 E	8.01	C	"B" ROAD
34 S	02 E	8.02	E	
34 S	02 E	29	C	
34 S	03 E	1	A	CHECK ACCESS
34 S	03 E	1	B	CHECK ACCESS
34 S	03 E	2		DECOMMISSION
34 S	03 E	3	A	
34 S	03 E	3	B	
34 S	03 E	3.01		
34 S	03 E	3.02	A	KEEP BLOCKED - EAGLE NEST
34 S	03 E	4	A	BLOCKED BY SWAMP: IMPROVE ROAD BY SURFACING 1ST 0.25 MILES
34 S	03 E	4.02	A	
34 S	03 E	4.02	B	
34 S	03 E	4.03	A	
34 S	03 E	4.03	B	DECOMMISSION THIS SEGMENT
34 S	03 E	4.03	C	
34 S	03 E	4.03	D	
34 S	03 E	5		
34 S	03 E	5.01		
34 S	03 E	5.02		BLOCKED BOTH ENDS
34 S	03 E	5.04		DECOMMISSION
34 S	03 E	5.05		
34 S	03 E	7		
34 S	03 E	7.01		
34 S	03 E	7.02		
34 S	03 E	7.03		DECOMMISSION
34 S	03 E	7.04		GUARD RAIL INSTALLED?
34 S	03 E	9	A	VINE MAPLE ROAD
34 S	03 E	9	B	VINE MAPLE ROAD
34 S	03 E	9	C	VINE MAPLE ROAD
34 S	03 E	9	D	VINE MAPLE ROAD
34 S	03 E	9	E	VINE MAPLE ROAD
34 S	03 E	9	F	VINE MAPLE ROAD
34 S	03 E	9.01	A	
34 S	03 E	9.01	B	MAY BE ECOMMISSIONED NATURALLY
34 S	03 E	9.02	A	WAS BLOCKED
34 S	03 E	9.02	B	INSTALL BLOCK @ BOTH ENDS
34 S	03 E	9.02	C	ONCE BLOCKED BOTH ENDS. PORTION OF THIS SEG TO BE BLOCKED. REST OPEN
34 S	03 E	9.03	A	missed opportunity for culvert - BLOCK @ PROPERTY LINE
34 S	03 E	9.03	B	
34 S	03 E	9.03	C	
34 S	03 E	10.01	A	OLD RAIL ROAD GRADE
34 S	03 E	10.01	B	OLD RAIL ROAD GRADE
34 S	03 E	10.01	C	OLD RAIL ROAD GRADE
34 S	03 E	10.01	D	ALREADY BLOCKED? DECOMMISSION

TRANSPORTATION OBJECTIVES FOR WATERSHED ANALYSIS: LOST CREEK

ROAD NO				REMARKS
34 S	03 E	10.01	E	ALREADY BLOCKED? DECOMMISSION
34 S	03 E	11	A	
34 S	03 E	11	B	
34 S	03 E	11.01	A	GUARD RAIL
34 S	03 E	11.02	A	
34 S	03 E	11.02	B	ROCK STREAM CROSSING
34 S	03 E	11.02	C	IMPROVE STREAM CROSSING
34 S	03 E	12	A	REDUCE MAINTENANCE
34 S	03 E	12	B	REDUCE MAINTENANCE
34 S	03 E	12	C	REDUCE MAINTENANCE
34 S	03 E	12.02		REDUCE MAINTENANCE
34 S	03 E	12.05		DECOMMISSION
34 S	03 E	12.06		DECOMMISSION
34 S	03 E	15.01	B	
34 S	03 E	15.01	C	
34 S	03 E	15.02	A	
34 S	03 E	15.02	B	COULD BLOCK
34 S	03 E	17	A	IS THIS A ROAD?
34 S	03 E	17	B	

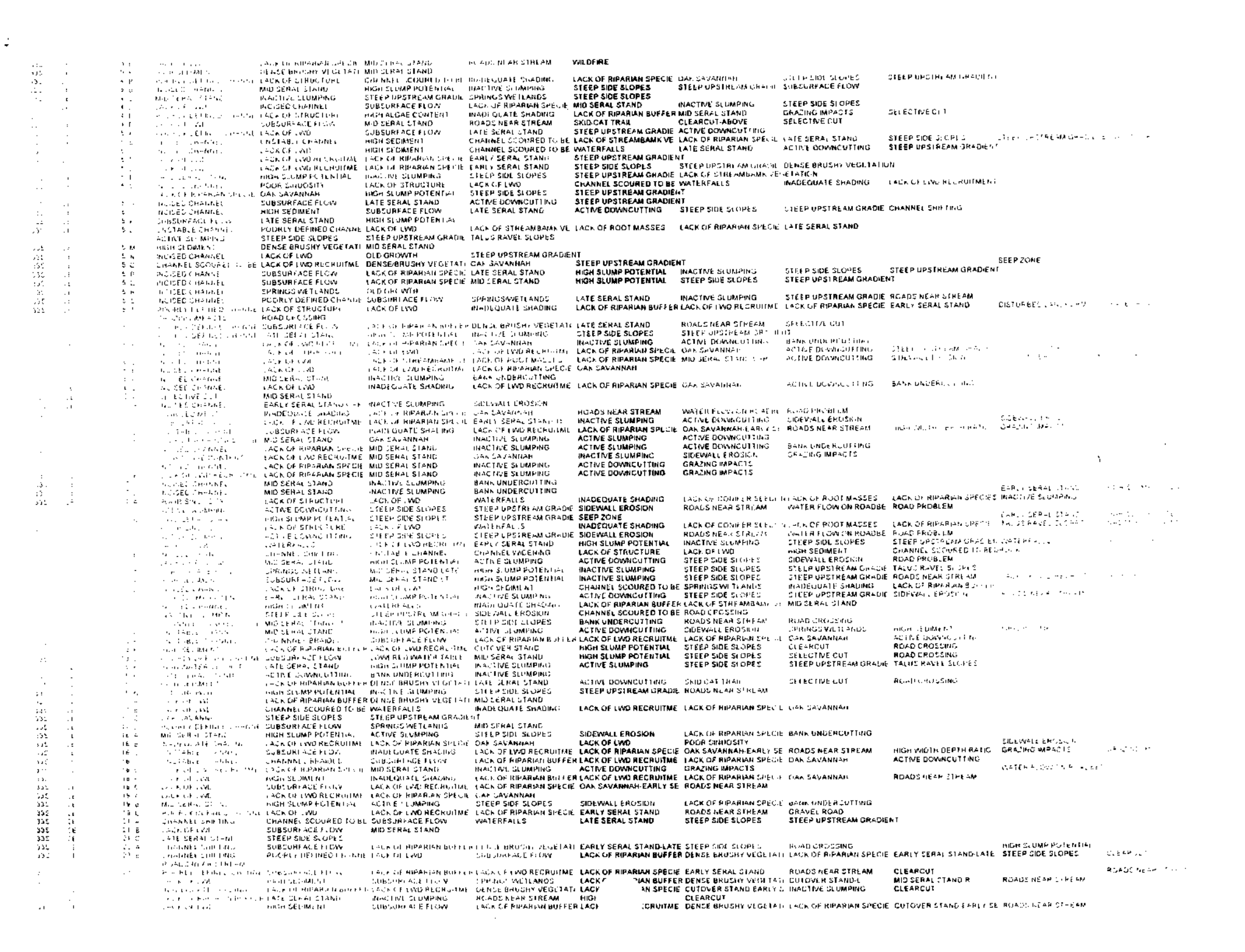
APPENDIX 5
AQUATIC ECOSYSTEM

Aquatic Habitat Inventory 1997.
(Summary to be added later.)

Fish Species Occurring Within the Lost Creek WAU

Common Name	ScientificName
Rainbow Trout	*Oncorhynchus mykiss*
Cutthroat Trout	*Oncorhynchus clarki*
*Brook Trout	*Salvelinus fontinalis*
*Brown Trout	*Salmo trutta*
Klamath Smallscale Sucker	*Catostomus rimiculus*
Prickly Sculpin	*Cottus asper*
Reticulate Sculpin	*Cottus perplexus*
*Smallmouth Bass	*Micropterus dolomieu*
*Largemouth Bass	*Micropterus salmoides*
*Bluegill Sunfish	*Lepomis macrochirus*
*Black Crappie	*Pomoxis nigromaculatus*
*Brown Bullhead	*Ictalurus nebulosus*

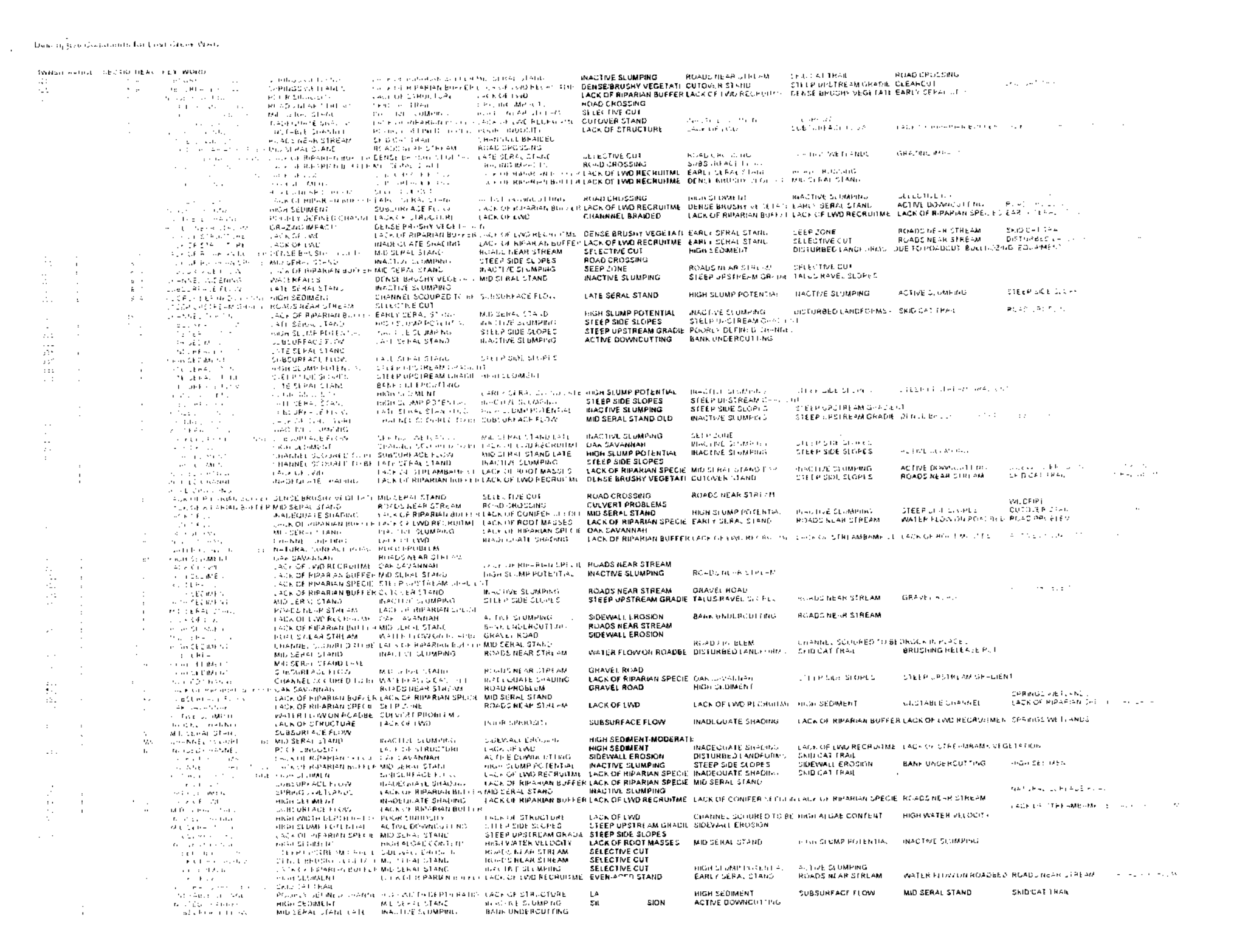
34S	3E	5	E	LACK OF RIPARIAN BUFFER	LACK OF LWD RECRUITME	DENSE BRUSHY VEGETATI	CUTOVER STAND	SATURATED SOIL	CLEARCUT	ROADS NEAR STREAM	SKID/CAT TRAIL		
34S	3E	5	F									GRAZING IMPACTS	
34S	3E	5	G	LACK OF STRUCTURE	LACK OF LWD	HIGH SEDIMENT	LACK OF RIPARIAN BUFFER	LACK OF LWD RECRUITME	DENSE/BRUSHY VEGETATI	EARLY SERAL STAND	ROADS NEAR STREAM		
34S	3E	5	H	LACK OF RIPARIAN BUFFER	MID SERAL STAND	ROADS NEAR STREAM							
34S	3E	5	J										
34S	3E	6	A	WATERFALLS	LACK OF RIPARIAN BUFFER	DENSE BRUSHY VEGETATI	CUTOVER STAND	CLEARCUT	ROADS NEAR STREAM	GRAVEL ROAD	GRAZING IMPACTS		
34S	3E	6	E	SUBSURFACE FLOW	SPRINGS/WETLANDS	MID SERAL STAND	GRAZING IMPACTS	SELECTIVE CUT					
34S	3E	6	C	INCISED CHANNEL	LATE SERAL STAND	BANK UNDERCUTTING	SELECTIVE CUT	DENSE/BRUSHY VEGETATION					
34S	3E	6	D	LACK OF RIPARIAN BUFFER	SEEP ZONE	GRAZING IMPACTS	ROAD PROBLEM					GRAZING IMPACTS	
34S	3E	7	A	POORLY DEFINED CHANNE	HIGH SEDIMENT	SPRINGS/WETLANDS	INADEQUATE SHADING	LACK OF RIPARIAN BUFFER	LACK OF LWD RECRUITME	CUTOVER STAND	CLEARCUT		
34S	3E	7	E	CHANNEL SHIFTING	UNSTABLE CHANNEL	POORLY DEFINED CHANNE	LACK OF RIPARIAN BUFFER	EARLY SERAL STAND	DISTURBED LANDFORMS	SKID/CAT TRAIL			
34S	3E	7	C	CHANNEL SHIFTING	UNSTABLE CHANNEL	POORLY DEFINED CHANNE	SUBSURFACE FLOW	LACK OF RIPARIAN BUFFER	LACK OF LWD RECRUITME	SKID/CAT TRAIL			
34S	3E	7	D	LACK OF LWD	LACK OF RIPARIAN BUFFER	SKID/CAT TRAIL							
34S	3E	7	L	CHANNEL SHIFTING	LACK OF RIPARIAN BUFFER	EARLY SERAL STAND	DISTURBED LANDFORMS	SKID/CAT TRAIL	GRAZING IMPACTS				
34S	3E	7	F	LACK OF RIPARIAN BUFFER	MID SERAL STAND	SKID/CAT TRAIL							
34S	3E	7	G	LACK OF RIPARIAN BUFFER	MID SERAL STAND	SKID/CAT TRAIL							
34S	3E	7	H	CHANNEL SHIFTING	LACK OF RIPARIAN BUFFER	MID SERAL STAND	SKID CAT TRAIL						
34S	3E	7	J	LACK OF STRUCTURE	LACK OF LWD	LACK OF RIPARIAN BUFFER	DENSE/BRUSHY VEGETATI	MID SERAL STAND	ROADS NEAR STREAM	SKID/CAT TRAIL			
34S	3E	7	K	LACK OF LWD	LACK OF RIPARIAN BUFFER	LACK OF LWD RECRUITME	DENSE/BRUSHY VEGETATI	CUTOVER STAND	GRAZING IMPACTS				
34S	3E	7	L	LACK OF RIPARIAN BUFFER	DENSE/BRUSHY VEGETATI	MID SERAL STAND	SATURATED SOIL	SKID/CAT TRAIL	GRAZING IMPACTS	SELECTIVE CUT			
34S	3E	8	A	LACK OF LWD	INADEQUATE SHADING	OAK SAVANNAH	SATURATED SOIL	GRAZING IMPACTS	COMPACTED SOILS	NOXIOUS WEEDS		LACK OF LWD	BRUSHING RELEASE PO
34S	3E	9	A	HIGH SEDIMENT	INADEQUATE SHADING	EARLY SERAL STAND	GRAZING IMPACTS	SATURATED SOIL	SEEP ZONE	PLANTATION	LACK OF LWD RECRUITMENT		
34S	3E	9	B									LACK OF ROOT MASSES	CUTOVER STAND
34S	3E	9	C	INCISED CHANNEL	CHANNEL SHIFTING	LACK OF LWD	HIGH SEDIMENT	LACK OF STRUCTURE	INADEQUATE SHADING	LACK OF RIPARIAN BUFFER	LACK OF LWD RECRUITMEN	SELECTIVE CUT	
34S	3E	10	A	POORLY DEFINED CHANNE	INADEQUATE SHADING	LACK OF RIPARIAN BUFFER	LACK OF LWD RECRUITME	DENSE/BRUSHY VEGETATI	EARLY SERAL STAND	SKID/CAT TRAIL	GRAZING IMPACTS		
34S	3E	12	B	LACK OF RIPARIAN BUFFER	LACK OF LWD RECRUITME	DENSE/BRUSHY VEGETATI	EARLY SERAL STAND	ROADS NEAR STREAM	SKID/CAT TRAIL	SELECTIVE CUT		INADEQUATE SHADING	LACK OF [illegible]
34S	3E	15	A	INCISED CHANNEL	UNSTABLE CHANNEL	POORLY DEFINED CHANNE	POOR SINUOSITY	LACK OF STRUCTURE	LACK OF LWD	HIGH SEDIMENT	HIGH ALGAE CONTENT		
				LACK OF LWD RECRUITME	LACK OF STREAMBANK VE	LACK OF RIPARIAN SPECIE	CUTOVER STAND	EARLY SERAL STAND	ACTIVE DOWNCUTTING	GRAZING IMPACTS	DIVERSIONS		



[illegible]		[illegible]	SELECTIVE CUT	MID SERAL STAND								
330	[illegible]	[illegible]	LACK OF LWD	MID SERAL STAND	INACTIVE SLUMPING	STEEP SIDE SLOPES	STEEP UPSTREAM GRADIENT					
335	[illegible]	[illegible]	HIGH WIDTH DEPTH RATIO	CHANNEL SCOURED TO BE	INADEQUATE SHADING	LACK OF STREAMBANK VE	LACK OF RIPARIAN SPECIE	OAK SAVANNAH-EARLY SE	HIGH SLUMP POTENTIAL	INACTIVE SLUMPING	STEEP SIDE SLOPES	SIDEWALL EROSION
			INCISED CHANNEL									
[illegible]		[illegible]	INCISED CHANNEL	LACK OF STRUCTURE	LACK OF LWD	LACK OF RIPARIAN SPECIE	MID SERAL STAND	ACTIVE DOWNCUTTING	STEEP SIDE SLOPES	SIDEWALL EROSION	STEEP UPSTREAM GRADIENT	
[illegible]		[illegible]	LACK OF STRUCTURE	LACK OF LWD	CHANNEL SCOURED TO BE	INADEQUATE SHADING	LACK OF LWD RECRUITME	LACK OF ROOT MASSES	LACK OF RIPARIAN SPECIE	OAK SAVANNAH	TALUS RAVEL SLOPES	
[illegible]	[illegible]	[illegible]	SUBSURFACE FLOW	LACK OF RIPARIAN SPECIE	MID SERAL STAND OAK SA	POORLY DEFINED CHANNEL						
[illegible]	[illegible]	[illegible]	HIGH WIDTH DEPTH RATIO	LACK OF LWD	CHANNEL SCOURED TO BE	INADEQUATE SHADING	LACK OF LWD RECRUITME	LACK OF RIPARIAN SPECIE	OAK SAVANNAH			
[illegible]	[illegible]	[illegible]	HIGH WIDTH DEPTH RATIO	HIGH ALGAE CONTENT	LACK OF RIPARIAN SPECIE	MID SERAL STAND	SIDEWALL EROSION					
[illegible]	[illegible]	[illegible]	MID SERAL STAND	INACTIVE SLUMPING	STEEP SIDE SLOPES	STEEP UPSTREAM GRADIENT					BANK UNDERCUTTING	
[illegible]	[illegible]	[illegible]	[illegible]	INADEQUATE SHADING	LACK OF RIPARIAN BUFFER	LACK OF LWD RECRUITME	LACK OF RIPARIAN SPECIE	MID SERAL STAND	INACTIVE SLUMPING	SIDEWALL EROSION	ROADS NEAR STREAM	
[illegible]		[illegible]	[illegible]	LACK OF RIPARIAN SPECIE	EARLY SERAL STAND	ROADS NEAR STREAM						
[illegible]		[illegible]	[illegible]	LACK OF RIPARIAN SPECIE	MID SERAL STAND	SIDEWALL EROSION	BANK UNDERCUTTING	ROADS NEAR STREAM	INADEQUATE SHADING	LACK OF LWD		
[illegible]			[illegible]	INADEQUATE SHADING	LACK OF LWD RECRUITME	LACK OF STREAMBANK VE	LACK OF RIPARIAN SPECIE	OAK SAVANNAH	SIDEWALL EROSION	ROADS NEAR STREAM		
[illegible]			[illegible]	LACK OF LWD RECRUITME	LACK OF RIPARIAN SPECIE	EARLY SERAL STAND	INACTIVE SLUMPING	ACTIVE DOWNCUTTING	SIDEWALL EROSION			
33			[illegible]	INADEQUATE SHADING	LACK OF LWD RECRUITME	LACK OF STREAMBANK VE	LACK OF RIPARIAN SPECIE	OAK SAVANNAH	SIDEWALL EROSION	ROADS NEAR STREAM	[illegible]	
[illegible]		[illegible]	[illegible]	POOR SINUOSITY	LACK OF STRUCTURE	LACK OF LWD	INADEQUATE SHADING	LACK OF LWD RECRUITME	LACK OF RIPARIAN SPECIE	OAK SAVANNAH	[illegible]	
[illegible]	[illegible]		[illegible]	LACK OF LWD	INADEQUATE SHADING	LACK OF LWD RECRUITME	LACK OF RIPARIAN SPECIE	OAK SAVANNAH-EARLY SE	ROADS NEAR STREAM	SUBSURFACE FLOW		
[illegible]	[illegible]		INCISED CHANNEL	LACK OF STRUCTURE	LACK OF LWD	INADEQUATE SHADING	LACK OF LWD RECRUITME	LACK OF RIPARIAN SPECIE	OAK SAVANNAH			
335	[illegible]	[illegible]	LACK OF RIPARIAN SPECIE	MID SERAL STAND	SIDEWALL EROSION	BANK UNDERCUTTING						
[illegible]	[illegible]	[illegible]	INCISED CHANNEL	CHANNEL BRAIDED	SUBSURFACE FLOW	MID SERAL STAND						
[illegible]	[illegible]	[illegible]	LACK OF LWD	LACK OF LWD RECRUITME	LACK OF RIPARIAN SPECIE	EARLY SERAL STAND OAK	SUBSURFACE FLOW					
[illegible]	[illegible]	[illegible]	LACK OF LWD	INADEQUATE SHADING	LACK OF LWD RECRUITME	LACK OF RIPARIAN SPECIE	EARLY SERAL STAND-OAK	INACTIVE SLUMPING	ACTIVE DOWNCUTTING	HIGH WATER VELOCITY		
		[illegible]	POORLY DEFINED CHANNEL	POOR SINUOSITY	LACK OF STRUCTURE	LACK OF LWD RECRUITME	MID SERAL STAND-EARLY	ROADS NEAR STREAM				
		[illegible]	POORLY DEFINED CHANNEL	SUBSURFACE FLOW	LACK OF RIPARIAN SPECIE	STEEP SIDE SLOPES	OAK SAVANNAH	ROADS NEAR STREAM				
		[illegible]	LACK OF RIPARIAN BUFFER	LACK OF LWD RECRUITME	MID SERAL STAND	BANK UNDERCUTTING	ROADS NEAR STREAM	OAK SAVANNAH				
		[illegible]	SUBSURFACE FLOW	HIGH ALGAE CONTENT	LACK OF RIPARIAN BUFFER	LACK OF LWD RECRUITME	MID SERAL STAND	OAK SAVANNAH	ROADS NEAR STREAM		[illegible]	
[illegible]		[illegible]	[illegible]	POOR SINUOSITY	LACK OF STRUCTURE	LACK OF LWD	HIGH ALGAE CONTENT	INADEQUATE SHADING	LACK OF RIPARIAN BUFFER	LACK OF LWD RECRUITMENT		
			MID SERAL STAND	ACTIVE DOWNCUTTING	WATER FLOW ON ROADBE	ROADS NEAR STREAM	GRAVEL ROAD	GRAZING IMPACTS	COMPACTED SOILS	ROAD PROBLEM	CULVERT PROBLEM	
[illegible]		[illegible]	[illegible]	LACK OF LWD	LACK OF STRUCTURE	MID SERAL STAND	STEEP UPSTREAM GRADIE					
[illegible]		[illegible]	[illegible]	LACK OF LWD RECRUITME	MID SERAL STAND	ACTIVE DOWNCUTTING	ROADS NEAR STREAM	GRAZING IMPACTS	HIGH SEDIMENT	INACTIVE SLUMPING	[illegible]	
[illegible]		[illegible]	[illegible]	UNSTABLE CHANNEL	SUBSURFACE FLOW	LACK OF RIPARIAN BUFFER	MID SERAL STAND	HIGH SLUMP POTENTIAL	INACTIVE SLUMPING	ACTIVE SLUMPING		
[illegible]		[illegible]	[illegible]	LACK OF RIPARIAN BUFFER	LACK OF LWD RECRUITME	MID SERAL STAND	CHANNEL SHIFTING	ROADS NEAR STREAM				
[illegible]		[illegible]	[illegible]	HIGH SLUMP POTENTIAL	INACTIVE SLUMPING	ACTIVE SLUMPING	ACTIVE DOWNCUTTING	BANK UNDERCUTTING	ROADS NEAR STREAM	ROAD PROBLEM	[illegible]	
[illegible]		[illegible]	[illegible]	UNSTABLE CHANNEL	INADEQUATE SHADING	LACK OF STREAMBANK VE	LACK OF ROOT MASSES	HIGH SLUMP POTENTIAL	INACTIVE SLUMPING	ACTIVE SLUMPING		
[illegible]		[illegible]	[illegible]	LACK OF RIPARIAN BUFFER	MID SERAL STAND	ACTIVE DOWNCUTTING	HIGH SEDIMENT				ROAD PROBLEM	
[illegible]		[illegible]	[illegible]	HIGH SEDIMENT	LACK OF RIPARIAN BUFFER	MID SERAL STAND	HIGH SLUMP POTENTIAL	INACTIVE SLUMPING	STEEP SIDE SLOPES	ROADS NEAR STREAM		
[illegible]		[illegible]	[illegible]	LACK OF LWD	LACK OF RIPARIAN BUFFER	MID SERAL STAND EA	HIGH SLUMP POTENTIAL	SIDEWALL EROSION	BANK UNDERCUTTING	ROAD PROBLEM		
[illegible]		[illegible]	[illegible]	CHANNEL SCOURED TO BE	INADEQUATE SHADING	LACK OF LWD RECRUITME	LACK OF CONIFER SEEDLIN	OAK SAVANNAH	STEEP UPSTREAM GRADIE	TALUS RAVEL SLOPES		
[illegible]		[illegible]	[illegible]	SUBSURFACE FLOW	LACK OF RIPARIAN BUFFER	MID SERAL STAND	ROADS NEAR STREAM					
[illegible]		[illegible]	[illegible]	SUBSURFACE FLOW	INADEQUATE SHADING	LACK OF RIPARIAN BUFFER	LACK OF LWD RECRUITME	LACK OF RIPARIAN SPECIE	OAK SAVANNAH	ROADS NEAR STREAM		
[illegible]		[illegible]	HIGH SEDIMENT	CHANNEL SCOURED TO BE	LACK OF RIPARIAN BUFFER	DENSE BRUSHY VEGETATI	MID SERAL STAND				[illegible]	
[illegible]		[illegible]	[illegible]	POOR SINUOSITY	LACK OF STRUCTURE	HIGH SEDIMENT	HIGH ALGAE CONTENT	HIGH WATER VELOCITY	INADEQUATE SHADING	[illegible]		
		[illegible]	[illegible]	LACK OF STREAMBANK VE	LACK OF ROOT MASSES	LACK OF RIPARIAN SPECIE	OAK SAVANNAH	ACTIVE DOWNCUTTING	BANK UNDERCUTTING			
[illegible]		[illegible]	[illegible]	LACK OF RIPARIAN BUFFER	LACK OF LWD RECRUITME	MID SERAL STAND	INACTIVE SLUMPING	SKID CAT TRAIL			[illegible]	
[illegible]		[illegible]	[illegible]	LACK OF STRUCTURE	DENSE BRUSHY VEGETATI	EARLY SERAL STAND	HIGH SLUMP POTENTIAL	INACTIVE SLUMPING	ACTIVE DOWNCUTTING	STEEP UPSTREAM GRADIEN	ACTIVE SLUMPING	
			[illegible]	CHANNEL SHIFTING								
[illegible]		[illegible]	[illegible]	UNSTABLE CHANNEL	POOR SINUOSITY	LACK OF STREAMBANK VE	LACK OF RIPARIAN SPECIE	EARLY SERAL STAND	HIGH SLUMP POTENTIAL	INACTIVE SLUMPING	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	SELECTIVE CUT	HIGH SLUMP POTENTIAL	INACTIVE SLUMPING	ACTIVE SLUMPING	STEEP SIDE SLOPES OR	STEEP UPSTREAM GRADIENT			
[illegible]	[illegible]	[illegible]	[illegible]	LACK OF LWD RECRUITME	MID SERAL STAND	BANK UNDERCUTTING	ROADS NEAR STREAM	OAK SAVANNAH				
[illegible]		[illegible]	[illegible]	SUBSURFACE FLOW	EARLY SERAL STAND	SKID CAT TRAIL	EXPOSED WATER TABLE	DISTURBED LANDFORM	DUE TO ROADCUT BULLDOZING EQUIPMENT		[illegible]	
[illegible]		[illegible]	[illegible]	SUBSURFACE FLOW	MID SERAL STAND	ACTIVE DOWNCUTTING	LACK OF STREAMBANK VE	SPOTS	STEEP SIDE SLOPES	TALUS RAVEL SLOPES		
			[illegible]	SUBSURFACE FLOW	MID SERAL STAND	HIGH SLUMP POTENTIAL	STEEP SIDE SLOPES	STEEP UPSTREAM GRADIENT				
[illegible]		[illegible]	[illegible]	LACK OF LWD RECRUITME	MID SERAL STAND	ACTIVE DOWNCUTTING	ROADS NEAR STREAM	GRAZING IMPACTS	HIGH SEDIMENT	INACTIVE SLUMPING		
[illegible]		[illegible]	[illegible]	SUBSURFACE FLOW	LACK OF RIPARIAN BUFFER	LACK OF LWD RECRUITME	EARLY SERAL STAND	ROADS NEAR STREAM				
[illegible]		[illegible]	CHANNEL [illegible]	SUBSURFACE FLOW	LACK OF RIPARIAN BUFFER	MID SERAL STAND	HIGH SLUMP POTENTIAL	INACTIVE SLUMPING	ROADS NEAR STREAM		[illegible]	
[illegible]		[illegible]	LACK OF LWD	CHANNEL SCOURED TO BE	SUBSURFACE FLOW	HIGH ALGAE CONTENT	LACK OF LWD RECRUITME	OAK SAVANNAH	SEEP ZONE	ROADS NEAR STREAM		
[illegible]		[illegible]	LACK OF LWD	SUBSURFACE FLOW	INADEQUATE SHADING	LACK OF LWD RECRUITME	OAK SAVANNAH	ROADS NEAR STREAM				
[illegible]	[illegible]	[illegible]	LACK OF LWD	LACK OF RIPARIAN BUFFER	MID SERAL STAND	INACTIVE SLUMPING	ACTIVE DOWNCUTTING	BANK UNDERCUTTING	ROADS NEAR STREAM			
[illegible]	[illegible]		INCISED CHANNEL	SUBSURFACE FLOW	MID SERAL STAND	HIGH SLUMP POTENTIAL	STEEP SIDE SLOPES	STEEP UPSTREAM GRADIENT				
[illegible]	[illegible]	[illegible]	LACK OF RIPARIAN BUFFER	MID SERAL STAND	INACTIVE SLUMPING	BANK UNDERCUTTING	ROADS NEAR STREAM					
[illegible]		[illegible]	POORLY DEFINED CHANNE	SUBSURFACE FLOW	EARLY SERAL STAND	LATE	SEEP ZONE	HEADWALL EROSION	SLIGHT		ROADS NEAR STREAM	
[illegible]		[illegible]	UNSTABLE CHANNEL	HIGH SEDIMENT	SUBSURFACE FLOW	LACK OF RIPARIAN BUFFER	LACK OF LWD RECRUITME	EARLY SERAL STAND	INACTIVE SLUMPING	BANK UNDERCUTTING	INACTIVE SLUMPING	
335	[illegible]	[illegible]	INCISED CHANNEL	SUBSURFACE FLOW	MID SERAL STAND	ACTIVE DOWNCUTTING	LACK OF STREAMBANK VE	SPOTS	STEEP SIDE SLOPES	TALUS RAVEL SLOPES	EARLY SERAL STAND	
335	[illegible]	[illegible]	UNSTABLE CHANNEL	POOR SINUOSITY	LACK OF STRUCTURE	LACK OF LWD	HIGH WATER TEMPERATUR	HIGH ALGAE CONTENT	INADEQUATE SHADING	LACK OF RIPARIAN BUFFER	ROADS NEAR STREAM	
335	[illegible]	27 D	HIGH SEDIMENT	MID SERAL STAND	BRUSHING RELEASE PCT							
335	[illegible]	27 E	LACK OF RIPARIAN BUFFER	LACK OF LWD RECRUITME	EARLY SERAL STAND	INACTIVE SLUMPING	SIDEWALL EROSION				TALUS RAVEL SLOPES	[illegible]
335	[illegible]	27 F	INCISED CHANNEL	POORLY DEFINED CHANNE	LACK OF LWD	LACK OF LWD RECRUITME	HIGH SLUMP POTENTIAL	ACTIVE SLUMPING	ACTIVE DOWNCUTTING	STEEP UPSTREAM GRADIENT		
335	[illegible]	27 F	LACK OF LWD	SUBSURFACE FLOW	LACK OF LWD RECRUITME	EARLY SERAL STAND	OAK SAVANNAH	ROADS NEAR STREAM			OAK SAVANNAH	
335	[illegible]	[illegible]	CHANNEL SCOURED TO BE	LACK OF LWD	INADEQUATE SHADING	LACK OF LWD RECRUITME	TALUS/RAVEL SLOPES	SUBSURFACE FLOW	LACK OF ROOT MASSES	LACK OF RIPARIAN SPECIES		
335	[illegible]	[illegible]	LACK OF STRUCTURE	LACK OF LWD	CHANNEL SCOURED TO BE	HIGH ALGAE CONTENT	INADEQUATE SHADING	LACK OF LWD RECRUITME	OAK SAVANNAH	STEEP SIDE SLOPES	ROADS NEAR STREAM	
335	[illegible]	[illegible]	CHANNEL SHIFTING	LACK OF LWD	LACK OF STRUCTURE	SUBSURFACE FLOW	LACK OF LWD RECRUITME	LACK OF RIPARIAN SPECIE	OAK SAVANNAH	TALUS RAVEL SLOPES		
335	[illegible]	[illegible]	SUBSURFACE FLOW	CHANNEL SCOURED TO BE	MID SERAL STAND	HIGH SLUMP POTENTIAL	INACTIVE SLUMPING	STEEP SIDE SLOPES			TALUS RAVEL SLOPES	
335	[illegible]	27 M	SUBSURFACE FLOW	INCISED CHANNEL	MID SERAL STAND	OAK SAVANNAH						
335	[illegible]	27 N	LACK OF LWD	SUBSURFACE FLOW	LACK OF LWD RECRUITME	OAK SAVANNAH	HIGH SLUMP POTENTIAL	INACTIVE SLUMPING	STEEP SIDE SLOPES	LACK OF RIPARIAN SPECIES		
335	[illegible]	[illegible]	SUBSURFACE FLOW	MID SERAL STAND	HIGH SLUMP POTENTIAL	INACTIVE SLUMPING	STEEP SIDE SLOPES	STEEP UPSTREAM GRADIE	TALUS RAVEL SLOPES			
335	[illegible]	27 P	HIGH WIDTH DEPTH RATIO	LACK OF STRUCTURE	LACK OF LWD	CHANNEL SCOURED TO BE	LACK OF LWD RECRUITME	OAK SAVANNAH	HIGH SLUMP POTENTIAL	ACTIVE SLUMPING		
335	[illegible]	[illegible]	LACK OF LWD	INADEQUATE SHADING	OAK SAVANNAH	STEEP UPSTREAM GRADIENT						
335	[illegible]	27 F	LACK OF LWD	CHANNEL SCOURED TO BE	LACK OF LWD RECRUITME	OAK SAVANNAH						
[illegible]		[illegible]	INCISED CHANNEL	LACK OF STRUCTURE	MID SERAL STAND LATE	INACTIVE SLUMPING	STEEP SIDE SLOPES	STEEP UPSTREAM GRADIENT				
[illegible]	[illegible]	[illegible]	INCISED CHANNEL	LACK OF LWD RECRUITME	MID SERAL STAND	OAK SAVANNAH	SIDEWALL EROSION	BANK UNDERCUTTING				
[illegible]		[illegible]	INCISED CHANNEL	POOR SINUOSITY	SUBSURFACE FLOW	MID SERAL STAND	INACTIVE SLUMPING	STEEP UPSTREAM GRADIE	BANK UNDERCUTTING			
[illegible]		[illegible]	INCISED CHANNEL	SUBSURFACE FLOW	LACK OF RIPARIAN BUFFER	LACK OF LWD RECRUITME	LACK OF RIPARIAN SPECIE	EARLY SERAL STAND				
[illegible]	[illegible]	[illegible]	LACK OF STRUCTURE	LACK OF RIPARIAN SPECIE	OAK SAVANNAH	SIDEWALL EROSION	BANK UNDERCUTTING					
[illegible]	[illegible]	[illegible]	LACK OF RIPARIAN BUFFER	MID SERAL STAND	INACTIVE SLUMPING	BANK UNDERCUTTING	HIGH SEDIMENT					
[illegible]	[illegible]	28 A	LACK OF RIPARIAN BUFFER	LACK OF LWD RECRUITME	MID SERAL STAND							
335	[illegible]	[illegible]	HIGH SEDIMENT	MID SERAL STAND	SATURATED SOIL						OAK SAVANNAH	
335	[illegible]	[illegible]	CHANNEL SHIFTING	UNSTABLE CHANNEL	POORLY DEFINED CHANNE	HIGH WIDTH DEPTH RATIO	SUBSURFACE FLOW	LACK OF RIPARIAN BUFFER	LACK OF RIPARIAN SPECIE	EARLY SERAL STAND	ROADS NEAR STREAM	[illegible]
330	[illegible]	[illegible]	POORLY DEFINED CHANNEL	HIGH WIDTH DEPTH RATIO	LACK OF STRUCTURE	LACK OF LWD	SPRINGS/WETLANDS	INADEQUATE SHADING	LACK OF LWD RECRUITME	SATURATED SOIL	TALUS/RAVEL SLOPES	ROADS NEAR STREAM
335	[illegible]	[illegible]	LACK OF LWD	HIGH SEDIMENT	HIGH ALGAE CONTENT	LACK OF RIPARIAN BUFFER	LACK OF LWD RECRUITME	DENSE/BRUSHY VEGETATI	LACK OF RIPARIAN SPECIE	EARLY SERAL STAND	LACK OF LWD RECRUITME	[illegible]
335	[illegible]	[illegible]	INCISED CHANNEL	POOR SINUOSITY	LACK OF STRUCTURE	LACK OF LWD	HIGH SEDIMENT	HIGH ALGAE CONTENT	INADEQUATE SHADING	LACK OF RIPARIAN BUFFER		
			LACK OF ROOT MASSES	LACK OF RIPARIAN SPECIE	EARLY SERAL STAND	ACTIVE DOWNCUTTING	SIDEWALL EROSION	ROADS NEAR STREAM	GRAZING IMPACTS			
335	[illegible]	A	SPRINGS WETLANDS	EARLY SERAL STAND	ROADS NEAR STREAM	IRRIGATION DITCH						
335	2E	3 F	LACK OF RIPARIAN BUFFER	DENSE BRUSHY VEGETATI	MID SERAL STAND	HEADWALL EROSION						
335	2E	3 A	POORLY DEFINED CHANNE	LACK OF RIPARIAN BUFFER	DENSE BRUSHY VEGETATI	MID SERAL STAND	ROADS NEAR STREAM	SELECTIVE CUT				
335	2E	3 B	CHANNEL SCOURED TO BE	LACK OF RIPARIAN BUFFER	MID SERAL STAND	BANK UNDERCUTTING	ROAD CROSSING					
335	2E	3 C	UNSTABLE CHANNEL	LACK OF RIPARIAN BUFFER	MID SERAL STAND	BANK UNDERCUTTING						
335	2E	3 C	LACK OF LWD	CHANNEL SCOURED TO BE	INADEQUATE SHADING	LACK OF LWD RECRUITME	LACK OF RIPARIAN SPECIE	OAK SAVANNAH				

Data of Key Components for Lost Creek Watt

TWNSH	RANGE	SECTIO	HEAC	KEY WORD									
[illegible]		[illegible]		[illegible]	[illegible]	[illegible]	MID SERAL STAND	INACTIVE SLUMPING	ROADS NEAR STREAM	SKID CAT TRAIL	ROAD CROSSING		
[illegible]		[illegible]		SPRINGS WETLANDS	[illegible]	[illegible]	[illegible]	DENSE/BRUSHY VEGETATI	CUTOVER STAND	STEEP UPSTREAM GRADIE	CLEARCUT	[illegible]	
[illegible]		[illegible]		POOR SINUOSITY	LACK OF STRUCTURE	LACK OF LWD		LACK OF RIPARIAN BUFFER	LACK OF LWD RECRUITME	DENSE BRUSHY VEGETATI	EARLY SERAL STAND		
[illegible]		[illegible]		ROAD SUBSURFACE FLOW	LACK OF TRAIL	GRAZING IMPACTS		ROAD CROSSING					
[illegible]		[illegible]		MID SERAL STAND	[illegible]	[illegible]		SELECTIVE CUT					
[illegible]		[illegible]		INADEQUATE SHADING	[illegible]	[illegible]	[illegible]	CUTOVER STAND	[illegible]	[illegible]			
[illegible]		[illegible]		[illegible]	[illegible]	POOR SINUOSITY		LACK OF STRUCTURE	LACK OF LWD	SUBSURFACE FLOW	[illegible]		
[illegible]		[illegible]		ROADS NEAR STREAM	SKID CAT TRAIL	CHANNEL BRAIDED							
[illegible]		[illegible]		MID SERAL STAND	ROADS NEAR STREAM	ROAD CROSSING							
[illegible]		[illegible]		LACK OF RIPARIAN BUFFER	DENSE BRUSHY VEGETATI	LATE SERAL STAND		SELECTIVE CUT	ROAD CROSSING	[illegible] WETLANDS	GRAZING IMPACTS		
[illegible]		[illegible]		[illegible]	[illegible]	[illegible]		ROAD CROSSING	SUBSURFACE FLOW				
[illegible]		[illegible]		[illegible]	[illegible]	[illegible]		LACK OF LWD RECRUITME	EARLY SERAL STAND	ROAD CROSSING			
[illegible]		[illegible]		[illegible]	[illegible]	[illegible]		LACK OF LWD RECRUITME	DENSE BRUSHY VEGETATI	MID SERAL STAND			
[illegible]		[illegible]		[illegible]	[illegible]								
[illegible]		[illegible]		LACK OF RIPARIAN BUFFER	EARLY SERAL STAND	[illegible]		ROAD CROSSING	HIGH SEDIMENT	INACTIVE SLUMPING	SELECTIVE CUT		
[illegible]		[illegible]		HIGH SEDIMENT	SUBSURFACE FLOW	LACK OF RIPARIAN BUFFER		LACK OF LWD RECRUITME	DENSE BRUSHY VEGETATI	EARLY SERAL STAND	ACTIVE DOWNCUTTING	[illegible]	
[illegible]		[illegible]		POORLY DEFINED CHANNEL	LACK OF STRUCTURE	LACK OF LWD		CHANNNEL BRAIDED	LACK OF RIPARIAN BUFFER	LACK OF LWD RECRUITME	LACK OF RIPARIAN SPECIES	EARLY SERAL STAND	
[illegible]		[illegible]		GRAZING IMPACTS	DENSE BRUSHY VEGETATION								
[illegible]		[illegible]		LACK OF LWD	LACK OF RIPARIAN BUFFER	LACK OF LWD RECRUITME		DENSE BRUSHY VEGETATI	EARLY SERAL STAND	SEEP ZONE	ROADS NEAR STREAM	SKID CAT TRAIL	
[illegible]		[illegible]		LACK OF LWD	INADEQUATE SHADING	LACK OF RIPARIAN BUFFER		LACK OF LWD RECRUITME	EARLY SERAL STAND	SELECTIVE CUT	ROADS NEAR STREAM	DISTURBED LANDFORMS	
[illegible]		[illegible]		DENSE BRUSHY VEGETATI	MID SERAL STAND	ROADS NEAR STREAM		SELECTIVE CUT	HIGH SEDIMENT	DISTURBED LANDFORMS	DUE TO ROADCUT BULLDOZING EQUIPMENT		
[illegible]		[illegible]		MID SERAL STAND	INACTIVE SLUMPING	STEEP SIDE SLOPES		ROAD CROSSING					
[illegible]		[illegible]		LACK OF RIPARIAN BUFFER	MID SERAL STAND	INACTIVE SLUMPING		SEEP ZONE	ROADS NEAR STREAM	SELECTIVE CUT			
[illegible]		[illegible]		CHANNEL WIDENING	WATERFALLS	DENSE BRUSHY VEGETATI	MID SERAL STAND	INACTIVE SLUMPING	STEEP UPSTREAM GRADIE	TALUS RAVEL SLOPES			
[illegible]		[illegible]		SUBSURFACE FLOW	LATE SERAL STAND	INACTIVE SLUMPING							
[illegible]		[illegible]		HIGH SEDIMENT	CHANNEL SCOURED TO BE	SUBSURFACE FLOW		LATE SERAL STAND	HIGH SLUMP POTENTIAL	INACTIVE SLUMPING	ACTIVE SLUMPING	STEEP SIDE SLOPES	
[illegible]		[illegible]		STEEP UPSTREAM GRADIE	ROADS NEAR STREAM	SELECTIVE CUT							
[illegible]		[illegible]		CHANNEL TOPSIDE	LACK OF RIPARIAN BUFFER	EARLY SERAL STAND	MID SERAL STAND	HIGH SLUMP POTENTIAL	INACTIVE SLUMPING	DISTURBED LANDFORMS	SKID CAT TRAIL	ROAD PROBLEM	
[illegible]		[illegible]		LATE SERAL STAND	HIGH SLUMP POTENTIAL	INACTIVE SLUMPING		STEEP SIDE SLOPES	STEEP UPSTREAM GRADIENT				
[illegible]		[illegible]		HIGH SLUMP POTENTIAL	INACTIVE SLUMPING	STEEP SIDE SLOPES		STEEP UPSTREAM GRADIE	POORLY DEFINED CHANNEL				
[illegible]		[illegible]		SUBSURFACE FLOW	LATE SERAL STAND	INACTIVE SLUMPING		ACTIVE DOWNCUTTING	BANK UNDERCUTTING				
[illegible]		[illegible]		LATE SERAL STAND									
[illegible]		[illegible]		SUBSURFACE FLOW	LATE SERAL STAND	STEEP SIDE SLOPES							
[illegible]		[illegible]		HIGH SLUMP POTENTIAL	STEEP UPSTREAM GRADIENT								
[illegible]		[illegible]		STEEP SIDE SLOPES	STEEP UPSTREAM GRADIE	HIGH SEDIMENT							
[illegible]		[illegible]		LATE SERAL STAND	BANK UNDERCUTTING								
[illegible]		[illegible]		[illegible]	HIGH SEDIMENT	EARLY SERAL STAND LATE		HIGH SLUMP POTENTIAL	INACTIVE SLUMPING	STEEP SIDE SLOPES	STEEP UPSTREAM GRADIENT		
[illegible]		[illegible]		LATE SERAL STAND	HIGH SLUMP POTENTIAL	INACTIVE SLUMPING		STEEP SIDE SLOPES	STEEP UPSTREAM GRADIENT				
[illegible]		[illegible]		SUBSURFACE FLOW	LATE SERAL STAND	HIGH SLUMP POTENTIAL		INACTIVE SLUMPING	STEEP SIDE SLOPES	STEEP UPSTREAM GRADIENT			
[illegible]		[illegible]		LACK OF STRUCTURE	CHANNEL SCOURED TO BE	SUBSURFACE FLOW		MID SERAL STAND OLD	INACTIVE SLUMPING	STEEP UPSTREAM GRADIE	DENSE BRUSHY VEGETATI	[illegible]	
[illegible]		[illegible]		INACTIVE SLUMPING									
[illegible]		[illegible]		SUBSURFACE FLOW	SPRINGS WETLANDS	MID SERAL STAND LATE		INACTIVE SLUMPING	SEEP ZONE				
[illegible]		[illegible]		HIGH SEDIMENT	CHANNEL SCOURED TO BE	LACK OF LWD RECRUITME		OAK SAVANNAH	INACTIVE SLUMPING	STEEP SIDE SLOPES			
[illegible]		[illegible]		CHANNEL SCOURED TO BE	SUBSURFACE FLOW	MID SERAL STAND LATE		HIGH SLUMP POTENTIAL	INACTIVE SLUMPING	STEEP SIDE SLOPES	ACTIVE SLUMPING		
[illegible]		[illegible]		CHANNEL SCOURED TO BE	LATE SERAL STAND	INACTIVE SLUMPING		STEEP SIDE SLOPES					
[illegible]		[illegible]		LACK OF LWD	LACK OF STREAMBANK VEGETATION	LACK OF ROOT MASSES		LACK OF RIPARIAN SPECIE	MID SERAL STAND EAR	INACTIVE SLUMPING	ACTIVE DOWNCUTTING	[illegible]	
[illegible]		[illegible]		INADEQUATE SHADING	LACK OF RIPARIAN BUFFER	LACK OF LWD RECRUITME		DENSE BRUSHY VEGETATI	CUTOVER STAND	STEEP SIDE SLOPES	ROADS NEAR STREAM	SKID CAT TRAIL	[illegible]
[illegible]		[illegible]		[illegible]									
[illegible]		[illegible]		DENSE BRUSHY VEGETATI	MID SERAL STAND	SELECTIVE CUT		ROAD CROSSING	ROADS NEAR STREAM				
[illegible]		[illegible]		LACK OF RIPARIAN BUFFER	MID SERAL STAND	ROADS NEAR STREAM		ROAD CROSSING	CULVERT PROBLEMS				WILDFIRE
[illegible]		[illegible]		INADEQUATE SHADING	LACK OF RIPARIAN BUFFER	LACK OF CONIFER SEEDLI		MID SERAL STAND	HIGH SLUMP POTENTIAL	INACTIVE SLUMPING	STEEP SIDE SLOPES	CUTOVER STAND	
[illegible]		[illegible]		LACK OF RIPARIAN BUFFER	LACK OF LWD RECRUITME	LACK OF ROOT MASSES		LACK OF RIPARIAN SPECIE	EARLY SERAL STAND	ROADS NEAR STREAM	WATER FLOW ON ROADBED	ROAD PROBLEM	
[illegible]		[illegible]		MID SERAL STAND	INACTIVE SLUMPING	LACK OF RIPARIAN SPECIE		OAK SAVANNAH					
[illegible]		[illegible]		CHANNEL SCOURED TO BE	LACK OF LWD	INADEQUATE SHADING		LACK OF RIPARIAN BUFFER	LACK OF LWD RECRUITME	LACK OF STREAMBANK VEGETATION	LACK OF ROOT MASSES	[illegible]	
[illegible]		[illegible]		NATURAL SURFACE ROAD	ROAD PROBLEM								
[illegible]		[illegible]		HIGH SEDIMENT	OAK SAVANNAH	ROADS NEAR STREAM							
[illegible]		[illegible]		LACK OF LWD RECRUITME	OAK SAVANNAH	LACK OF RIPARIAN SPECIE		ROADS NEAR STREAM					
[illegible]		[illegible]		LACK OF RIPARIAN BUFFER	MID SERAL STAND	HIGH SLUMP POTENTIAL		INACTIVE SLUMPING	ROADS NEAR STREAM				
[illegible]		[illegible]		LACK OF RIPARIAN SPECIE	STEEP UPSTREAM GRADIENT								
[illegible]		[illegible]		LACK OF RIPARIAN BUFFER	CUTOVER STAND	INACTIVE SLUMPING		ROADS NEAR STREAM	GRAVEL ROAD				
[illegible]		[illegible]		HIGH SEDIMENT	MID SERAL STAND	INACTIVE SLUMPING		STEEP SIDE SLOPES	STEEP UPSTREAM GRADIE	TALUS RAVEL SLOPES	ROADS NEAR STREAM	GRAVEL ROAD	
[illegible]		[illegible]		MID SERAL STAND	ROADS NEAR STREAM	LACK OF RIPARIAN SPECIE							
[illegible]		[illegible]		LACK OF LWD RECRUITME	OAK SAVANNAH	ACTIVE SLUMPING		SIDEWALL EROSION	BANK UNDERCUTTING	ROADS NEAR STREAM			
[illegible]		[illegible]		LACK OF RIPARIAN BUFFER	MID SERAL STAND	BANK UNDERCUTTING		ROADS NEAR STREAM					
[illegible]		[illegible]		ROADS NEAR STREAM	WATER FLOW ON ROADBED	GRAVEL ROAD		SIDEWALL EROSION					
[illegible]		[illegible]		CHANNEL SCOURED TO BE	LACK OF RIPARIAN BUFFER	MID SERAL STAND			ROAD PROBLEM	CHANNEL SCOURED TO BE	DROCK IN PLACES		
[illegible]		[illegible]		MID SERAL STAND	INACTIVE SLUMPING	ROADS NEAR STREAM		WATER FLOW ON ROADBE	DISTURBED LANDFORMS	SKID CAT TRAIL	BRUSHING RELEASE PUT		
[illegible]		[illegible]		MID SERAL STAND LATE									
[illegible]		[illegible]		SUBSURFACE FLOW	MID SERAL STAND	ROADS NEAR STREAM		GRAVEL ROAD					
[illegible]		[illegible]		CHANNEL SCOURED TO BE	WATERFALLS CASCADE	INADEQUATE SHADING		LACK OF RIPARIAN SPECIE	OAK SAVANNAH	STEEP SIDE SLOPES	STEEP UPSTREAM GRADIENT		
[illegible]		[illegible]		OAK SAVANNAH	ROADS NEAR STREAM	ROAD PROBLEM		GRAVEL ROAD	HIGH SEDIMENT				
[illegible]		[illegible]		LACK OF RIPARIAN BUFFER	LACK OF RIPARIAN SPECIE	MID SERAL STAND						SPRINGS WETLANDS	
[illegible]		[illegible]		LACK OF RIPARIAN SPECIE	SEEP ZONE	ROADS NEAR STREAM		LACK OF LWD	LACK OF LWD RECRUITME	HIGH SEDIMENT	UNSTABLE CHANNEL	LACK OF RIPARIAN SPECIE	[illegible]
[illegible]		[illegible]		WATER FLOW ON ROADBE	CULVERT PROBLEMS								
[illegible]		[illegible]		LACK OF STRUCTURE	LACK OF LWD	POOR SINUOSITY		SUBSURFACE FLOW	INADEQUATE SHADING	LACK OF RIPARIAN BUFFER	LACK OF LWD RECRUITMEN	SPRINGS WETLANDS	
[illegible]		[illegible]		MID SERAL STAND	SUBSURFACE FLOW								
[illegible]		[illegible]		CHANNEL SCOURED TO BE	MID SERAL STAND	INACTIVE SLUMPING	SIDEWALL EROSION	HIGH SEDIMENT-MODERATE					
[illegible]		[illegible]		POOR SINUOSITY	LACK OF STRUCTURE	LACK OF LWD		HIGH SEDIMENT	INADEQUATE SHADING	LACK OF LWD RECRUITME	LACK OF STREAMBANK VEGETATION		
[illegible]		[illegible]		LACK OF RIPARIAN SPECIE	OAK SAVANNAH	ACTIVE DOWNCUTTING		SIDEWALL EROSION	DISTURBED LANDFORMS	SKID CAT TRAIL			
[illegible]		[illegible]		LACK OF RIPARIAN BUFFER	MID SERAL STAND	HIGH SLUMP POTENTIAL		INACTIVE SLUMPING	STEEP SIDE SLOPES	SIDEWALL EROSION	BANK UNDERCUTTING	HIGH SEDIMENT	
[illegible]		[illegible]		HIGH SEDIMENT	SUBSURFACE FLOW	LACK OF LWD RECRUITME		LACK OF RIPARIAN SPECIE	INADEQUATE SHADING	SKID CAT TRAIL			
[illegible]		[illegible]		SUBSURFACE FLOW	INADEQUATE SHADING	LACK OF RIPARIAN BUFFER		LACK OF RIPARIAN SPECIE	MID SERAL STAND				
[illegible]		[illegible]		SPRINGS WETLANDS	LACK OF RIPARIAN BUFFER	MID SERAL STAND		INACTIVE SLUMPING				NATURAL SURFACE ROAD	
[illegible]		[illegible]		HIGH SEDIMENT	INADEQUATE SHADING	LACK OF RIPARIAN BUFFER		LACK OF LWD RECRUITME	LACK OF CONIFER SEEDLIN	LACK OF RIPARIAN SPECIE	ROADS NEAR STREAM		
[illegible]		[illegible]		SUBSURFACE FLOW	LACK OF RIPARIAN BUFFER							LACK OF STREAMBANK VEGETATION	
[illegible]		[illegible]		HIGH WIDTH DEPTH RATIO	POOR SINUOSITY	LACK OF STRUCTURE		LACK OF LWD	CHANNEL SCOURED TO BE	HIGH ALGAE CONTENT	HIGH WATER VELOCITY		
[illegible]		[illegible]		HIGH SLUMP POTENTIAL	ACTIVE DOWNCUTTING	STEEP SIDE SLOPES		STEEP UPSTREAM GRADIE	SIDEWALL EROSION				
[illegible]		[illegible]		LACK OF RIPARIAN SPECIE	MID SERAL STAND	STEEP UPSTREAM GRADIE		STEEP SIDE SLOPES					
[illegible]		[illegible]		HIGH SEDIMENT	HIGH ALGAE CONTENT	HIGH WATER VELOCITY		LACK OF ROOT MASSES	MID SERAL STAND	HIGH SLUMP POTENTIAL	INACTIVE SLUMPING		
[illegible]		[illegible]		STEEP UPSTREAM GRADIE	SIDEWALL EROSION	ROADS NEAR STREAM		SELECTIVE CUT					
[illegible]		[illegible]		DENSE BRUSHY VEGETATI	MID SERAL STAND	ROADS NEAR STREAM		SELECTIVE CUT					
[illegible]		[illegible]		LACK OF RIPARIAN BUFFER	MID SERAL STAND	INACTIVE SLUMPING		SELECTIVE CUT	HIGH SLUMP POTENTIAL	ACTIVE SLUMPING			
[illegible]		[illegible]		HIGH SEDIMENT	LACK OF RIPARIAN BUFFER	LACK OF LWD RECRUITME		EVEN-AGED STAND	EARLY SERAL STAND	ROADS NEAR STREAM	WATER FLOW ON ROADBED	ROADS NEAR STREAM	[illegible]
[illegible]		[illegible]		SKID CAT TRAIL									
[illegible]		[illegible]		POORLY DEFINED CHANNEL	HIGH WIDTH DEPTH RATIO	LACK OF STRUCTURE		LA	HIGH SEDIMENT	SUBSURFACE FLOW	MID SERAL STAND	SKID CAT TRAIL	
[illegible]		[illegible]		HIGH SEDIMENT	MID SERAL STAND	INACTIVE SLUMPING		SIL SION	ACTIVE DOWNCUTTING				
[illegible]		[illegible]		MID SERAL STAND LATE	INACTIVE SLUMPING	BANK UNDERCUTTING							



Recomended a ir reaches in Lost Creek WAU

33S	3E	7	A	PFC	NA	NONE	BUFFER RIPARIAN ZONE					
33S	3E	7	B	FAR	NA	BUFFER RIPARIAN ZONE						
33S	3E	7	C	FAR	NA	BUFFER RIPARIAN ZONE						
33S	3E	18	A	NON	NA	ADD CHANNEL STRUCTURE	BUFFER RIPARIAN ZONE					
33S	3E	18	B	PFC	NA	BUFFER RIPARIAN ZONE						
33S	3E	18	C	PFC	NA	BUFFER RIPARIAN ZONE						
33S	3E	18	D	FAR	UP	BUFFER RIPARIAN ZONE	ROAD CLOSURE;DECOMMISSI ROAD OBLITERATION					
33S	3E	18	E	PFC	NA	BUFFER RIPARIAN ZONE						
33S	3E	18	F	FAR	NA	BUFFER RIPARIAN ZONE						
33S	3E	18	G	FAR	NA	BUFFER RIPARIAN ZONE						
33S	3E	18	A	PFC	NA	BUFFER RIPARIAN ZONE						
33S	3E	18	B	FAR	UP	BUFFER RIPARIAN ZONE	ROAD CLOSURE;DECOMMISSI ROAD OBLITERATION					
33S	3E	19	C	PFC	NA	BUFFER RIPARIAN ZONE						
33S	3E	19	D	PFC	NA	BUFFER RIPARIAN ZONE						
33S	3E	19	E	FAR	UP	BUFFER RIPARIAN ZONE	RIPARIAN THINNING					
33S	3E	19	F	FAR	NA	BUFFER RIPARIAN ZONE	BANK PROTECTION					
33S	3E	19	G	FAR	DN	ADD LWD	BUFFER RIPARIAN ZONE					
33S	3E	19	J	FAR	NA	BUFFER RIPARIAN ZONE						
33S	3E	18	K	PFC	NA	BUFFER RIPARIAN ZONE	CULVERT IMPROVEMENT					
33S	3E	25	A	PFC	NA	NONE						
33S	3E	29	A	PFC	NA	BUFFER RIPARIAN ZONE						
33S	3E	29	A	FAR	UP	NONE						
33S	3E	29	B	FAR	UP	NONE						
33S	3E	29	C	FAR	UP	NONE						
33S	3E	29	D	FAR	NA	INSTALL WATERBARS						
33S	3E	29	E	FAR	UP	NONE						
33S	3E	29	F	FAR	UP	NONE						
33S	3E	29	J	PFC	NA	BUFFER RIPARIAN ZONE						
33S	3E	29	K	PFC	NA	BUFFER RIPARIAN ZONE						
33S	3E	29	L	FAR	UP	BUFFER RIPARIAN ZONE						
33S	3E	30	A	PFC	UP	BUFFER RIPARIAN ZONE						
33S	3E	31	A	FAR	UP	NONE						
33S	3E	31	B	FAR	NA	BUFFER RIPARIAN ZONE						
33S	3E	31	C	FAR	NA	BUFFER RIPARIAN ZONE						
33S	3E	31	D	FAR	NA	ADD LWD	BUFFER RIPARIAN ZONE					
33S	3E	31	E	FAR	NA	BUFFER RIPARIAN ZONE						
33S	3E	31	F	FAR	NA	BUFFER RIPARIAN ZONE						
33S	3E	31	G	FAR	NA	BUFFER RIPARIAN ZONE						
33S	3E	31	H	FAR	NA	BUFFER RIPARIAN ZONE						
33S	3E	31	J	FAR	NA	BUFFER RIPARIAN ZONE						
33S	3E	31	K	FAR	NA	ADD LWD	BUFFER RIPARIAN ZONE					
33S	3E	31	L	FAR	UP	BUFFER RIPARIAN ZONE						
33S	3E	31	M	FAR	NA	BUFFER RIPARIAN ZONE						
33S	3E	31	N	FAR	NA	BUFFER RIPARIAN ZONE						
33S	3E	31	O	FAR	NA	BUFFER RIPARIAN ZONE						
33S	3E	32	A	FAR	UP	NONE						
33S	3E	32	B	PFC	NA	NONE						
33S	3E	32	C	FAR	UP	NONE						
33S	3E	33	A	FAR	UP	NONE						
33S	3E	33	B	FAR	UP	NONE						
34S	2E	5	A	PFC	NA	NONE						
34S	2E	5	B	PFC	NA	NONE						
34S	2E	5	C	FAR	NA	BUFFER RIPARIAN ZONE						
34S	3E	2	A	NON	NA	ADD LWD	TREE PLANTING	BANK PROTECTION	CATTLE EXCLOSURE	WEED CONTROL		
34S	3E	2	B	FAR	UP	ADD LWD	TREE PLANTING	CATTLE EXCLOSURE				
34S	3E	2	C	FAR	NA	NONE						
34S	3E	3	A	FAR	NA	CATTLE EXCLOSURE	FISH SURVEY					
34S	3E	3	B	FAR	NA	ADD LWD	TREE PLANTING	CATTLE EXCLOSURE	FISH SURVEY			
34S	3E	3	C	FAR	UP	NONE						
34S	3E	3	D	FAR	NA	CATTLE EXCLOSURE	ADD LWD	FISH SURVEY				
34S	3E	8	E	NON	NA	ADD LWD	TREE PLANTING	CATTLE EXCLOSURE	FISH SURVEY			
34S	3E	8	F	FAR	NA	NONE						
34S	3E	8	G	FAR	NA	NONE						
34S	3E	5	A	FAR	UP	NONE						
34S	3E	5	B	FAR	NA	NONE						
34S	3E	5	C	PFC	NA	NONE						
34S	3E	5	D	FAR	UP	NONE						
34S	3E	5	E	FAR	UP	NONE						
34S	3E	5	F	PFC	NA	NONE						
34S	3E	5	G	FAR	UP	NONE						
34S	3E	5	H	PFC	NA	NONE						
34S	3E	5	J	FAR	NA							
34S	3E	6	A	FAR	UP	NONE						
34S	3E	6	B	PFC	NA	NONE						
34S	3E	6	C	PFC	NA	NONE						
34S	3E	6	D	PFC	NA	NONE						
34S	3E	7	A	FAR	NA	NONE						
34S	3E	7	B	FAR	UP							
34S	3E	7	C	FAR	UP	NONE						
34S	3E	7	D	FAR	NA	NONE						
34S	3E	7	E	FAR	UP							
34S	3E	7	F	PFC	NA	FISH SURVEY						
34S	3E	7	G	PFC	NA	NONE						
34S	3E	7	H	FAR	UP	NONE						
34S	3E	7	J	FAR	UP	NONE						
34S	3E	7	K	FAR	UP	NONE						
34S	3E	7	L	FAR	UP	NONE						
34S	3E	9	A	PFC	NA							
34S	3E	9	A	FAR	UP							
34S	3E	9	B	FAR	NA							
34S	3E	9	C	NON	NA	ADD LWD	STABALIZE CHANNEL	BANK PROTECTION	CATTLE EXCLOSURE			
34S	3E	12	A	FAR	NA	FISH SURVEY						
34S	3E	12	B	FAR	UP	FISH SURVEY						
34S	3E	16	A	NON	DN	ADD CHANNEL STRUCTURE	ADD LWD	BUFFER RIPARIAN ZONE	STABALIZE CHANNEL	ENHANCE SHADING	CATTLE EXCLOSURE	RETURN FLOW TO STREAMBED

Recomended actions for reaches in Lost Creek WAU

335	2E	5	K	PFC	NA	BUFFER RIPARIAN ZONE							
335	2E	6	L	NON	UP	ADD LWD	BUFFER RIPARIAN ZONE						
335	2E	6	M	FAR	NA	BUFFER RIPARIAN ZONE							
335	2E	5	N	PFC	NA	BUFFER RIPARIAN ZONE							
335	2E	5	O	FAR	NA	BUFFER RIPARIAN ZONE							
335	2E	5	P	PFC	NA	BUFFER RIPARIAN ZONE							
335	2E	5	Q	FAR-	NA	BUFFER RIPARIAN ZONE							
335	2E	5	R	PFC	NA	BUFFER RIPARIAN ZONE							
335	2E	5	S	PFC	NA	BUFFER RIPARIAN ZONE							
335	2E	5	T	NON	NA	BUFFER RIPARIAN ZONE	CATTLE EXCLOSURE						
335	2E	5	W	FAR	NA	BUFFER RIPARIAN ZONE							
335	2E	6	A	PFC	NA	BUFFER RIPARIAN ZONE							
335	2E	6	B	FAR	NA	BUFFER RIPARIAN ZONE							
335	2E	6	C	FAR	NA	BUFFER RIPARIAN ZONE							
335	2E	6	D	FAR	NA	BUFFER RIPARIAN ZONE							
335	2E	6	E	FAR	NA	BUFFER RIPARIAN ZONE							
335	2E	6	F	FAR	NA	BUFFER RIPARIAN ZONE							
335	2E	6	G	FAR	NA	BUFFER RIPARIAN ZONE							
335	2E	7	A	FAR	NA	BUFFER RIPARIAN ZONE							
335	2E	7	B	FAR	NA	BUFFER RIPARIAN ZONE							
335	2E	7	C	FAR	NA	Z26	BUFFER RIPARIAN ZONE						
335	2E	7	D	FAR	UP	BUFFER RIPARIAN ZONE							
335	2E	7	E	FAR	NA	BUFFER RIPARIAN ZONE							
335	2E	7	F	FAR	NA	BUFFER RIPARIAN ZONE							
335	2E	7	G	FAR	NA	BUFFER RIPARIAN ZONE							
335	2E	7	H	FAR	DN	BUFFER RIPARIAN ZONE	CATTLE EXCLOSURE						
335	2E	7	J	FAR	NA	BUFFER RIPARIAN ZONE							
335	2E	7	K	FAR	NA	BUFFER RIPARIAN ZONE							
335	2E	7	Y	FAR	NA	BUFFER RIPARIAN ZONE							
335	2E	7	Z	FAR	UP	BUFFER RIPARIAN ZONE							
335	2E	11	A	NON	NA	ADD CHANNEL STRUCTURE	ADD LWD	STABALIZE CHANNEL	ENHANCE SHADING	CULVERT IMPROVEMENT	REDUCE FLOW VELOCITY	ROAD REPAIR	MONITOR
335	2E	11	B	FAR	UP	NONE							
335	2E	11	C	NON	NA	ADD CHANNEL STRUCTURE	ADD LWD	STABALIZE CHANNEL	ENHANCE SHADING	CULVERT IMPROVEMENT	REDUCE FLOW VELOCITY	ROAD REPAIR	MONITOR
335	2E	11	D	FAR	NA	NONE							
335	2E	11	E	NON	NA	ADD CHANNEL STRUCTURE	BUFFER RIPARIAN ZONE						
335	2E	12	A	PFC	NA	NONE	BUFFER RIPARIAN ZONE						
335	2E	13	A	PFC	NA	BUFFER RIPARIAN ZONE							
335	2E	13	B	FAR	UP	ADD CHANNEL STRUCTURE	BUFFER RIPARIAN ZONE	ENHANCE SHADING					
335	2E	13	C	FAR	UP	BUFFER RIPARIAN ZONE							
335	2E	13	D	PFC	NA	BUFFER RIPARIAN ZONE							
335	2E	13	E	NON	NA	BUFFER RIPARIAN ZONE	ROAD OBLITERATION						
335	2E	13	F	FAR	NA	BUFFER RIPARIAN ZONE							
335	2E	13	F	FAR	NA	BUFFER RIPARIAN ZONE							
335	2E	13	G	FAR	NA	BUFFER RIPARIAN ZONE							
335	2E	15	E	PFC	NA	BUFFER RIPARIAN ZONE							
335	2E	15	F	PFC	NA	BUFFER RIPARIAN ZONE							
335	2E	15	G	FAR	NA	BUFFER RIPARIAN ZONE							
335	2E	15	N	PFC	NA	BUFFER RIPARIAN ZONE							
335	2E	17	A	FAR	NA	BUFFER RIPARIAN ZONE							
335	2E	17	B	FAR	NA	NONE							
335	2E	17	C	PFC	NA	BUFFER RIPARIAN ZONE							
335	2E	17	D	PFC	NA	BUFFER RIPARIAN ZONE							
335	2E	18	A	FAR	NA	BUFFER RIPARIAN ZONE							
335	2E	18	B	FAR	NA	ADD LWD	BUFFER RIPARIAN ZONE	ENHANCE SHADING					
335	2E	18	C	FAR	NA	BUFFER RIPARIAN ZONE							
335	2E	18	D	FAR	NA	BUFFER RIPARIAN ZONE							
335	2E	18	E	FAR	NA	BUFFER RIPARIAN ZONE							
335	2E	18	F	FAR	NA	BUFFER RIPARIAN ZONE							
335	2E	18	G	FAR	UP	BUFFER RIPARIAN ZONE							
335	2E	19	A	FAR	NA	BUFFER RIPARIAN ZONE							
335	2E	19	B	FAR	NA	BUFFER RIPARIAN ZONE							
335	2E	19	C	FAR	NA	BUFFER RIPARIAN ZONE							
335	2E	21	A	PFC	NA	NONE							
335	2E	21	B	FAR	UP	NONE							
335	2E	21	C	FAR	UP	FISH SURVEY							
335	2E	23	A	FAR	NA	BUFFER RIPARIAN ZONE							
335	2E	23	B	FAR	NA	BUFFER RIPARIAN ZONE							
335	2E	23	C	NON	NA	BUFFER RIPARIAN ZONE	ROAD CLOSURE/DECOMMISSION						
335	2E	23	D	FAR	UP	ADD LWD	BUFFER RIPARIAN ZONE	ROAD CLOSURE/DECOMMISSION					
335	2E	23	E	FAR	NA	BUFFER RIPARIAN ZONE	ROAD CLOSURE/DECOMMISSION						
335	2E	23	F	FAR	NA	BUFFER RIPARIAN ZONE	ROAD CLOSURE/DECOMMISSION						
335	2E	23	G	FAR	UP	ADD LWD	BUFFER RIPARIAN ZONE	ROAD CLOSURE/DECOMMISSION					
335	2E	24	A	PFC	NA	BUFFER RIPARIAN ZONE							
335	2E	26	A	FAR	NA	BUFFER RIPARIAN ZONE	ADD CHANNEL STRUCTURE	TREE PLANTING					
335	2E	27	A	FAR	NA	NONE							
335	2E	27	B	FAR	NA	ADD LWD	ROAD CLOSURE/DECOMMISSION						
335	2E	27	C	FAR	NA	BUFFER RIPARIAN ZONE	MINIMIZE ROAD USE	ROAD CLOSURE/DECOMMISSI	ROAD OBLITERATION				
335	2E	27	D	FAR	NA	BUFFER RIPARIAN ZONE							
335	2E	27	E	NON	NA	BUFFER RIPARIAN ZONE							
335	2E	27	F	FAR	UP	BUFFER RIPARIAN ZONE							
335	2E	27	G	FAR	UP	BUFFER RIPARIAN ZONE							
335	2E	29	A	FAR	UP	NONE							
335	2E	29	B	PFC	NA								
335	2E	29	C	FAR	UP	NONE							
335	2E	29	D	FAR	NA	BUFFER RIPARIAN ZONE							
335	2E	29	E	FAR	NA	BUFFER RIPARIAN ZONE							
335	2E	29	F	FAR	NA	BUFFER RIPARIAN ZONE							
335	2E	31	A	FAR	UP	NONE							
335	2E	31	B	FAR	UP	HEADWALL PLANTING							
335	2E	31	C	FAR	UP	NONE							
335	2E	31	D	FAR	UP	NONE							
335	2E	31	E	PFC	NA	NONE							
335	2E	33	A	FAR	NA	BUFFER RIPARIAN ZONE							
335	2E	33	B	FAR	NA	BUFFER RIPARIAN ZONE							
335	2E	[illegible]		FAR	NA	BUFFER RIPARIAN ZONE							
335	2E			NON	DN	BUFFER RIPARIAN ZONE	CATTLE EXCLOSURE						
335	2E			FAR	NA	BUFFER RIPARIAN ZONE							
335	2E			FAR	NA	BUFFER RIPARIAN ZONE							

Recommended actions for reaches in Lost Creek WAU

335	1E			NA	BUFFER RIPARIAN ZONE			
335	1E		4	UP	BUFFER RIPARIAN ZONE			
335	1E	14	4R	NA	BUFFER RIPARIAN ZONE			
335	1E	13	B FAR	DN	BUFFER RIPARIAN ZONE			
335	1E	13	C FAR	NA	BUFFER RIPARIAN ZONE			
335	1E	13	D FAR	NA	BUFFER RIPARIAN ZONE			
335	1E	13	E FAR	UP	BUFFER RIPARIAN ZONE			
335	1E	13	G FAR	NA	BUFFER RIPARIAN ZONE			
335	1E	13	J FAR	NA	BUFFER RIPARIAN ZONE			
335	1E	13	K FAR	NA	ADD LWD	BUFFER RIPARIAN ZONE		
335	1E	14	A FAR	NA	BUFFER RIPARIAN ZONE			
335	1E	14	B FAR	NA	BUFFER RIPARIAN ZONE			
335	1E	14	C FAR	NA	BUFFER RIPARIAN ZONE			
335	1E	14	D FAR	NA	BUFFER RIPARIAN ZONE			
335	1E	14	E NON	NA	CULVERT IMPROVEMENT	ROAD OBLITERATION	RETURN FLOW TO STREAMBED	
335	1E	14	F FAR	NA	BUFFER RIPARIAN ZONE			
335	1E	14	G FAR	NA	BUFFER RIPARIAN ZONE	FISH SURVEY		
335	1E	15	A FAR	NA	BUFFER RIPARIAN ZONE	STABALIZE CHANNEL	ROAD OBLITERATION	
335	1E	15	B FAR	NA	BUFFER RIPARIAN ZONE			
335	1E	15	C FAR	NA	BUFFER RIPARIAN ZONE			
335	1E	15	D NON	NA	BUFFER RIPARIAN ZONE	TREE PLANTING		
335	1E	15	E FAR	NA	BUFFER RIPARIAN ZONE			
335	1E	15	F FAR	NA	BUFFER RIPARIAN ZONE	RETURN FLOW TO STREAMBED		
335	1E	15	G FAR	DN	BUFFER RIPARIAN ZONE	ROAD CLOSURE/DECOMMISSION		
335	1E	15	H FAR	NA	BUFFER RIPARIAN ZONE			
335	1E	15	J FAR	NA	BUFFER RIPARIAN ZONE			
335	1E	15	K FAR	NA	BUFFER RIPARIAN ZONE			
335	1E	15	L FAR	DN	BUFFER RIPARIAN ZONE	FISH SURVEY	SEDIMENT TRAPS	
335	1E	16	M NON	NA	BUFFER RIPARIAN ZONE	TREE PLANTING	ADD CHANNEL STRUCTURE	
335	1E	16	N FAR	UP	BUFFER RIPARIAN ZONE	ADD LWD		
335	1E	16	O FAR	DN	BUFFER RIPARIAN ZONE			
335	1E	16	P NON	DN	ADD CHANNEL STRUCTURE	ADD LWD	BUFFER RIPARIAN ZONE	SEDIMENT TRAPS
335	1E	16	Q FAR	NA	BUFFER RIPARIAN ZONE			
335	1E	16	R FAR	NA	BUFFER RIPARIAN ZONE			
335	1E	23	A FAR	UP	NONE			
335	1E	22	B FAR	UP	BUFFER RIPARIAN ZONE			
335	1E	22	C FAR	NA	BUFFER RIPARIAN ZONE			
335	1E	23	A FAR	NA	BUFFER RIPARIAN ZONE	FISH SURVEY		
335	1E	23	B FAR	NA	NONE			
335	1E	23	C FAR	NA	BUFFER RIPARIAN ZONE			
335	1E	23	E FAR	NA	ADD LWD	ENHANCE SHADING		
335	1E	23	F FAR	NA	ADD LWD	ENHANCE SHADING		
335	1E	27	A FAR	NA	BUFFER RIPARIAN ZONE			
335	1E	27	AA FAR	NA	NA			
335	1E	27	B FAR	NA	BUFFER RIPARIAN ZONE			
335	1E	27	BB FAR	NA	BUFFER RIPARIAN ZONE			
335	1E	27	C FAR	DN	BUFFER RIPARIAN ZONE			
335	1E	27	CC FAR	UP	BUFFER RIPARIAN ZONE			
335	1E	27	D NON	NA	BUFFER RIPARIAN ZONE			
335	1E	27	DD FAR	NA	BUFFER RIPARIAN ZONE			
335	1E	27	E FAR	NA	BUFFER RIPARIAN ZONE			
335	1E	27	F NON	NA	TREE PLANTING			
335	1E	27	F FAR	NA	BUFFER RIPARIAN ZONE			
335	1E	27	G FAR	NA	NONE			
335	1E	27	H FAR	NA	NONE			
335	1E	27	J NON	NA	ADD LWD			
335	1E	27	L PFC	NA	BUFFER RIPARIAN ZONE			
335	1E	27	M PFC	NA	BUFFER RIPARIAN ZONE			
335	1E	27	N FAR	NA	BUFFER RIPARIAN ZONE			
335	1E	27	O FAR	UP	BUFFER RIPARIAN ZONE			
335	1E	27	P FAR	NA	BUFFER RIPARIAN ZONE			
335	1E	27	Q PFC	NA	NONE			
335	1E	27	R PFC	NA	BUFFER RIPARIAN ZONE			
335	1E	27	S PFC	NA	BUFFER RIPARIAN ZONE			
335	1E	27	T FAR	NA	BUFFER RIPARIAN ZONE			
335	1E	27	U FAR	NA	BUFFER RIPARIAN ZONE			
335	1E	27	W FAR	NA	BUFFER RIPARIAN ZONE			
335	1E	27	X FAR	NA	BUFFER RIPARIAN ZONE			
335	1E	27	Y FAR	NA	BUFFER RIPARIAN ZONE	FISH SURVEY		
335	1E	28	A FAR	NA	BUFFER RIPARIAN ZONE			
335	1E	28	C FAR	NA	BUFFER RIPARIAN ZONE			
335	1E	28	D FAR	NA	BUFFER RIPARIAN ZONE			
335	1E	35	A FAR	NA	NONE			
335	1E	35	B FAR	NA	NONE			
335	1E	35	C FAR	NA	CATTLE EXCLOSURE			
335	2E	3	A PFC	NA	BUFFER RIPARIAN ZONE			
335	2E	3	F PFC	NA	BUFFER RIPARIAN ZONE			
335	2E	3	A FAR	NA	BUFFER RIPARIAN ZONE			
335	2E	3	B FAR	NA	BUFFER RIPARIAN ZONE			
335	2E	3	C FAR	NA	BUFFER RIPARIAN ZONE			
335	2E	3	D FAR	NA	BUFFER RIPARIAN ZONE			
335	2E	3	E FAR	NA	BUFFER RIPARIAN ZONE			
335	2E	9	A FAR	NA	BUFFER RIPARIAN ZONE			
335	2E	4	B FAR	NA	BUFFER RIPARIAN ZONE			
335	2E	9	B PFC	NA	BUFFER RIPARIAN ZONE			
335	2E	4	C PFC	NA	BUFFER RIPARIAN ZONE			
335	2E	4	D FAR	UP	BUFFER RIPARIAN ZONE	ADD LWD		
335	2E	4	E NON	NA	CATTLE EXCLOSURE	BUFFER RIPARIAN ZONE		
335	2E	4	F FAR	NA	BUFFER RIPARIAN ZONE			
335	2E	5	A PFC	NA	BUFFER RIPARIAN ZONE			
335	2E	5	B FAR	DN	BUFFER RIPARIAN ZONE			
335	2E	5	C FAR	NA	BUFFER RIPARIAN ZONE			
335	2E	5	D FAR	NA	BUFFER RIPARIAN ZONE			
335	2E	5	E FAR	NA	BUFFER RIPARIAN ZONE			
335	2E	5	F PFC	NA	BUFFER RIPARIAN ZONE			
335	2E	5	G NON	NA	BUFFER RIPARIAN ZONE			
335	2E	5	H FAR	NA	BUFFER RIPARIAN ZONE			
335	2E	5	J PFC	NA	BUFFER RIPARIAN ZONE			

Recommended actions for reaches in Lost Creek WAU

TWNSH	RANGE	SECTIO	REA	RATIN	TREND	Recommended Action						
32S	1E	36	A	PFC	NA	BUFFER RIPARIAN ZONE						
32S	1E	36	B	FAR	NA	BUFFER RIPARIAN ZONE						
32S	1E	36	C	NON	DN	ADD CHANNEL STRUCTURE	BUFFER RIPARIAN ZONE	CATTLE EXCLOSURE				
32S	1E	36	D	PFC	NA	BUFFER RIPARIAN ZONE						
32S	1E	36	E	FAR	NA	BUFFER RIPARIAN ZONE						
32S	1E	36	F	FAR	DN	ADD CHANNEL STRUCTURE	BUFFER RIPARIAN ZONE					
32S	1E	36	G	FAR	NA	BUFFER RIPARIAN ZONE						
32S	2E	33	A	FAR	NA	BUFFER RIPARIAN ZONE						
32S	2E	33	B	FAR	NA	BUFFER RIPARIAN ZONE						
32S	2E	33	C	NON	NA	BUFFER RIPARIAN ZONE	CULVERT IMPROVEMENT					
32S	2E	33	D	FAR	NA	BUFFER RIPARIAN ZONE						
32S	2E	33	E	FAR	NA	BUFFER RIPARIAN ZONE						
32S	2E	33	F	FAR	NA	BUFFER RIPARIAN ZONE						
32S	2E	33	G	NON	DN	BUFFER RIPARIAN ZONE	CATTLE EXCLOSURE					
32S	2E	33	H	FAR	NA	BUFFER RIPARIAN ZONE						
32S	2E	33	J	FAR	NA	BUFFER RIPARIAN ZONE						
32S	2E	33	K	FAR	NA	BUFFER RIPARIAN ZONE						
32S	3E	8	A	PFC	NA	BUFFER RIPARIAN ZONE						
32S	3E	18	A	PFC	NA	BUFFER RIPARIAN ZONE						
32S	3E	18	B	PFC	NA	BUFFER RIPARIAN ZONE						
32S	3E	18	C	PFC	NA	BUFFER RIPARIAN ZONE						
32S	3E	19	A	FAR	NA	BUFFER RIPARIAN ZONE						
32S	3E	19	C	FAR	NA	BUFFER RIPARIAN ZONE	RETURN FLOW TO STREAMBED					
32S	3E	19	D	PFC	NA	BUFFER RIPARIAN ZONE						
33S	1E	1	A	PFC	NA	BUFFER RIPARIAN ZONE						
33S	1E	1	B	FAR	NA	BUFFER RIPARIAN ZONE						
33S	1E	1	C	PFC	NA	BUFFER RIPARIAN ZONE						
33S	1E	1	D	FAR	NA	BUFFER RIPARIAN ZONE						
33S	1E	1	E	FAR	NA	BUFFER RIPARIAN ZONE						
33S	1E	1	F	PFC	NA	BUFFER RIPARIAN ZONE						
33S	1E	1	G	PFC	NA	BUFFER RIPARIAN ZONE						
33S	1E	1	H	FAR	NA	BUFFER RIPARIAN ZONE						
33S	1E	1	K	PFC	NA	BUFFER RIPARIAN ZONE						
33S	1E	1	L	PFC	NA	BUFFER RIPARIAN ZONE						
33S	1E	1	M	PFC	NA	BUFFER RIPARIAN ZONE						
33S	1E	1	N	PFC	NA	BUFFER RIPARIAN ZONE						
33S	1E	1	O	PFC	NA	BUFFER RIPARIAN ZONE						
33S	1E	1	P	FAR	NA	BUFFER RIPARIAN ZONE						
33S	1E	1	Q	PFC	NA	BUFFER RIPARIAN ZONE						
33S	1E	1	R	FAR	UP	BUFFER RIPARIAN ZONE						
33S	1E	1	S	FAR	NA	BUFFER RIPARIAN ZONE						
33S	1E	3	A	FAR	NA	BUFFER RIPARIAN ZONE						
33S	1E	3	B	FAR	NA	BUFFER RIPARIAN ZONE						
33S	1E	3	C	FAR	NA	BUFFER RIPARIAN ZONE	CULVERT IMPROVEMENT	ROAD CLOSURE/DECOMMISSION				
33S	1E	3	D	FAR	NA	BUFFER RIPARIAN ZONE						
33S	1E	11	A	NON	UP	ADD LWD	ROAD OBLITERATION					
33S	1E	11	AA	FAR	NA	NONE						
33S	1E	11	B	NON	DN	ADD CHANNEL STRUCTURE	ADD LWD	BUFFER RIPARIAN ZONE	STABALIZE CHANNEL	ROAD CLOSURE/DECOMMISSI	ROAD OBLITERATION	INSTALL WATERBARS
33S	1E	11	BB	PFC	NA	NONE						
33S	1E	11	C	FAR	NA	ADD LWD						
33S	1E	11	CC	FAR	NA	NONE						
33S	1E	11	D	PFC	NA	NONE						
33S	1E	11	DD	FAR	UP	ROAD CLOSURE/DECOMMISSI	ROAD OBLITERATION					
33S	1E	11	E	FAR	NA	ROAD CLOSURE/DECOMMISSION						
33S	1E	11	EE	PFC	NA	NONE						
33S	1E	11	F	FAR	NA	NONE						
33S	1E	11	FF	FAR	NA	BUFFER RIPARIAN ZONE						
33S	1E	11	G	FAR	NA	ROAD CLOSURE DECOMMISSI	ROAD OBLITERATION	FISH SURVEY				
33S	1E	11	GG	FAR	NA	BUFFER RIPARIAN ZONE						
33S	1E	11	H	FAR	DN	ROAD CLOSURE/DECOMMISSI	ROAD OBLITERATION	BUFFER RIPARIAN ZONE				
33S	1E	11	HH	FAR	UP	BUFFER RIPARIAN ZONE						
33S	1E	11	J	FAR	NA	ROAD CLOSURE/DECOMMISSI	ROAD OBLITERATION					
33S	1E	11	JJ	FAR	NA	ENHANCE SHADING						
33S	1E	11	K	FAR	NA	ROAD CLOSURE DECOMMISSI	ROAD OBLITERATION					
33S	1E	11	KK	FAR	NA	NONE						
33S	1E	11	L	FAR	DN	CULVERT IMPROVEMENT	ROAD OBLITERATION					
33S	1E	11	LL	NON	NA	ADD CHANNEL STRUCTURE	ADD LWD	BUFFER RIPARIAN ZONE	ENHANCE SHADING			
33S	1E	11	M	PFC	NA	NONE						
33S	1E	11	MM	FAR	NA	NONE						
33S	1E	11	N	NON	NA	ADD CHANNEL STRUCTURE	ADD LWD	BANK PROTECTION				
33S	1E	11	NN	FAR	NA	BUFFER RIPARIAN ZONE						
33S	1E	11	O	FAR	NA	NONE						
33S	1E	11	OO	FAR	NA	ENHANCE SHADING						
33S	1E	11	P	PFC	NA	NONE						
33S	1E	11	Q	FAR	NA	BUFFER RIPARIAN ZONE	TREE PLANTING					
33S	1E	11	R	FAR	NA	NONE						
33S	1E	11	S	NON	NA	ADD LWD	ADD CHANNEL STRUCTURE	REDUCE FLOW VELOCITY				
33S	1E	11	T	FAR	UP	NONE						
33S	1E	11	U	FAR	UP	ADD LWD						
33S	1E	11	V	PFC	NA	NONE						
33S	1E	11	W	FAR	NA	FISH SURVEY						
33S	1E	11	X	NON	NA	ADD LWD	BUFFER RIPARIAN ZONE	ROAD OBLITERATION	RETURN FLOW TO STREAMBED			
33S	1E	11	Y	FAR	UP	NONE						
33S	1E	11	Z	FAR	NA	NONE						
33S	1E	12	A	PFC	NA	BUFFER RIPARIAN ZONE						
33S	1E	12	B	FAR	NA	BUFFER RIPARIAN ZONE						
33S	1E	12	C	FAR	NA	BUFFER RIPARIAN ZONE						
33S	1E	12	D	FAR	NA	BUFFER RIPARIAN ZONE						
33S	1E	12	E	FAR	DN	BUFFER RIPARIAN ZONE						
33S	1E	12	F	FAR	NA	BUFFER RIPARIAN ZONE						
33S	1E	12	G	FAR	NA	BUFFER RIPARIAN ZONE						
33S	1E	12	H	FAR	NA	BUFFER RIPARIAN ZONE						
33S	1E	12	J	FAR	UP	BUFFER RIPARIAN ZONE						
33S	1E	12	K	FAR	NA	BUFFER RIPARIAN ZONE						
33S	1E			FAR	NA	BUFFER RIPARIAN ZONE-BURN						
33S	1E			FAR	NA	BUFFER RIPARIAN ZONE						
33S	1E			FAR	NA	BUFFER RIPARIAN ZONE						

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TWNSH	RANGE	SECTIO	REACH	ELEV	ASPECT	CATEG	CHNL_STA	SLUMP_PR	SLUMP_PO	RATING	TREND_
33S	1E	1	H	2630	SE	IW	P	Y	H	FAR	NA
33S	1E	15	A	2770	SE	ID	P	Y	H	FAR	NA
33S	1E	15	C	2360	S	IW	P	Y	H	FAR	NA
33S	1E	15	D	2340	S	IW	P	Y	H	NON	NA
33S	1E	15	P	2680	E	ID	P	Y	H	NON	DN
33S	1E	27	F	1580	SE	IW	P	Y	H	NON	NA
33S	2E	5	L	3150	W	ID	P	Y	H	NON	UP
33S	2E	5	P	3250	SE	PE	P	Y	H	PFC	NA
33S	2E	5	Q	3460	SE	IW	P	Y	H	FAR	NA
33S	2E	11	A	2500	N	IW	P	Y	H	NON	NA
33S	2E	11	C	2280	N	IW	P	Y	H	NON	NA
33S	2E	11	E	2440	N	PE	P	Y	H	NON	NA
33S	3E	29	J	3750	NE	PE	P	Y	L	PFC	NA
32S	2E	33	G	3500	SE	PE	P	N	L	NON	DN
33S	1E	11	Y	2480	SE	IW	P	N	L	FAR	UP
33S	1E	15	M	2070	E	IW	P	N	L	NON	NA
33S	2E	4	E	3640	E	PE	P	N	L	NON	NA
33S	2E	31	C	2740	W	IW	P	N	L	FAR	UP
34S	3E	7	C	3940	E	ID	P	N	L	FAR	UP
34S	3E	9	B	3140	E	ID	P	N	L	FAR	NA
34S	3E	15	A	3240	NE	IW	P	N	L	NON	DN

TOWNSH	RANGE	SECTIO	REA	ELEV	ASPECT	CATE	CHNL	STA	SLUMP_PR	SLUMP_POT	KEY_WORD	KEY_WORD_CONTINUED	KEYWORD_RA	RATING	TREND
[illegible]	[illegible]	35	C	3080	SE	ID	G	N	L		A1,A7,A8,A9,C2,C3,C7,C11	D4,E3,E10,E11,E25	Z2,Z4,Z14	NON	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	A1,A3,A4,A7,A8,A9,B2,C2,C3,	D4,E3,E10,A13	Z2,Z4	[illegible]	[illegible]
[illegible]	[illegible]	23	G	3500	SE	PE	P	N	L		A3,A4,A8,A8,A13,C2,C3,C8,C	E3,E11,C7	Z4,Z14	NON	[illegible]
[illegible]	[illegible]	11	B	2040	SW	IW	F	N	L		A1,A2,A9,C1,C2,C3,C4,C8,C8,	,D4,E3,E4,E8,E23	Z2,Z3,Z4,Z5,Z15,Z16,Z19	NON	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NE	W	F	[illegible]	L		B2,C12,D2,E3,E4,E6,E10,E15,		Z15,Z16,Z4	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	SE	W	F	[illegible]	L		C15,C8,D12,E3,A9,C3,A10,A3,	D3,E4,E7	Z9,Z16	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	S	W	G	N	M		A1,A8,A9,C8,C12,D4,D5,D9		Z4	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	SE	D	F	N	L		A1,A7,A8,A9,C1,C3,C8,C15,D4	D11,E3	Z4	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	SE	W	F	[illegible]	H		A1,A9,C2,C12-EA,D1,D9,D11,E22,		Z4,Z15	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NE	PE	F	N	M		A10,A11,C2,C7,C12,		Z4,Z25,Z12	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NE	ID	F	Y	H		A1,A8,C7,C11,D1,D2,D4,D6,D	D11,A2	Z4	[illegible]	
33S	1E	35	P	2680	E	ID	P	Y	H		**A1,A3,A7,C4,C8,C11,D1,D2,D**	**D6,D8**	**Z2,Z3,Z4,Z12**	NON	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	1740	SE	W	F	[illegible]	L		A3,A10,B2,C2,C3,C11,D2,D11,		Z4	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	3600	SW	PE	F	N	M		A1,A3,A10,A11,C4,C8,C13	D4,D5,D6,D11	Z4	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	2560	S	PE	F	[illegible]	M		B3,C3,C12,C15,D2,D9,E11		Z4,Z14	[illegible]	[illegible]
35S	2E	35	A	4580	SW	PE	F	N	L		**A3,A9,A10,B6,C2,C11,E1**	**E11,E25**	**Z4,Z14**	NON	[illegible]
[illegible]	[illegible]	19	[illegible]	3750	NE	PE	G	N	L		A9,C3,C5,C7,C10,D8,		Z3,Z4,	[illegible]	[illegible]
34E	3E	15	A	3240	NE	IW	P	N	L		A1,A3,A4,A7,A8,A9,A10,B3,C	,C3,C4,C8,C10,C11,D4,E11,E13,E	Z2,Z3,Z4,Z5,Z8,Z14,Z29	NON	[illegible]

18 results