United States Department of Agriculture Forest Service

Travel Analysis Process For West Ishi Pishi

Ukonom Ranger District
Klamath National Forest

Administered by Six Rivers National Forest

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Travel Analysis Process for West Ishi Pishi

Executive Summary

The Travel Analysis Process (TAP) is intended to identify opportunities for the National Forest Transportation System (NFTS) to meet current or future management objectives, and to provide information that allows integration of ecological, social, and economic concerns into future decisions. The TAP is tailored to local situations, landscape conditions and issues as identified by the Analysis Team and input from interested citizens, local government agencies, and tribal governments. See Appendix A for a Summary of the Travel Analysis Process.

The outcome of this TAP is a set of *recommendations*[1] for future management of forest transportation system roads within the area known as West Ishi Pishi in the Ukonom Ranger District. Those recommendations contain an:

- Identification of the minimum road system needed for safe and efficient travel and for administration, utilization, and protection of National Forest System lands and,
- Identification of roads on lands under Forest Service jurisdiction that are no longer needed to meet forest resource management objectives and that, therefore, should be decommissioned or considered for other uses, such as for trails.

Travel Analysis supports and informs subsequent National Environmental Policy Act (NEPA) processes, allowing individual projects to be more site-specific and focused, while still addressing cumulative impacts.

Process Plan

The TAP will follow the six step process outlined in FSH 7709.55, Chapter 20, and is similar to the Roads Analysis Process (RAP), as described in FS-643, *Roads Analysis: Informing Decisions about Managing the National Forest Transportation System* (USDA Forest Service 1999).

- Step 1 – Setting up the Analysis Area
- Step 2 – Describing the Situation
- Step 3 – Identifying Issues
- Step 4 – Assessing Benefits, Risks and Problems
- Step 5– Describing Opportunities and Setting Priorities that would Implement the Minimum Road System

Summary of Issues

Issues were identified using public involvement and internal Forest Service input. A summary of public involvement comments received is listed in Appendix B. Issues include:

- Public access for personal enjoyment & recreation activities

[1] Recommendation does not indicate a decision by the responsible official or subsequent change on the ground. This is a suggestion as to what is a good or sensible thing given the current circumstance.

- Access to hunting, woodcutting and gathering areas
- Administrative access for vegetation and fuels management activities
- Insufficient resources for maintenance of the road system
- Introduction of Port-Orford-cedar (POC) root disease
- Impacts to cultural resources
- Impacts to water quality
- Road closures and road decommissioning in general
- Risk of human-caused fire and illegal marijuana cultivation

Summary of Recommendations Responding to Issues

- Add short distance motorized routes that provide access to dispersed recreation sites.
- Stormproof[2] roads deemed necessary for continued public access and future land management activities.
- Rehabilitate areas damaged by unauthorized vehicles use.
- Reduce the number and use of roads in Critical Habitat for Coho and Northern spotted owl.
- Reduce the number and use of roads with high risk for introduction of POC root disease.
- Reduce the number and use of roads necessary to protect sensitive cultural resources.

Key Results and Finding

Through the travel analysis process, the analysis team assessed routes based on the risks to natural and cultural resources and the benefits of motorized access.

- 19 percent of roads in the current system have been assessed to have a greater risk than benefit, and should be considered for decommissioning, closure to reduce resource risk.
- 30 percent of the current system are roads with high to moderate benefits and should be considered for additional maintenance necessary to mitigate resource risk.
- There are 1.5 miles of existing unauthorized routes (which are not currently part of the transportation system) that have been assessed as being needed accommodate access to established dispersed recreation sites. These include 12N53.1, 13N26A.1, 12N22.2, 12N22.3, 12N22.4, 13N13.2, 13N14.0, 13N16.1, 13N18.3, 14N21.4.
- There are 21 miles of existing unauthorized roads (which are not currently part of the transportation system) that have been assessed as needing restoration to lower the risk of adverse effects to water quality and aquatic and cultural resources.

[2] Stormproofing includes non-routine maintenance activities that improve the roads resiliency to withstand larger storm events. Common treatments include installing larger diameter culverts, constructing rolling dips, outsloping and spot rocking the travelway.

How the Report will be used

Travel Analysis Process results will assist the Six Rivers National Forest in addressing issues related to the West Ishi Pishi area road system. It will be used to inform future analyses, decisions, and specific project actions.

Physical Environment

Elevations within the West Ishi Pishi project area range from below 800 feet along the Klamath River to 5,200 feet at Rock Creek Butte. The climate is Mediterranean, typified by hot, dry summers, and cool, moist winters. Precipitation ranges from an annual rainfall of about 64" in the lower elevations near the Klamath River to about 95" in the highest elevations, with approximately 90% falling between October and May. Summer precipitation occurs predominantly as thunderstorm activity, with high-intensity, short-duration thunderstorms common (USDA Forest Service 1998). Snowfall typically accumulates above 4,000' elevation.

The landscape of the project area is typical of the Klamath Mountains Province, with deep canyons and steep slopes, relatively high gradient, high-energy dendritic streams, and widespread mass wasting. Much of the landscape contains many large, ancient deep-seated landslide deposits, and is susceptible to debris slides, debris flows, and accelerated gully erosion. Active mass wasting in the form of rock fall, debris slides, deep-seated slumps, and earth flows are common throughout the watershed.

Biological Environment

The Dillon and Rock Creek watersheds contain high quality spawning and rearing habitat for anadromous salmonids. The project area contains an estimated 11 miles of anadromous fish bearing streams supporting fall and spring Chinook salmon, winter Coho salmon, and summer and winter steelhead trout. Dillon Creek has been designated as a Key Watershed due to its important role in the recovery of at-risk fish stocks within the Mid-Klamath River basin (USDA Forest Service 1998). Identifying and treating sources of road related sediment production is an important step in the recovery of sensitive fish species within the Mid-Klamath River basin.

Cultural, Economic, and Social Environment

Ancestors of the Karuk people have inhabited the area for many millennia. They continue to use the area for spiritual renewal, fishing, hunting, as well as gathering raw materials for food and basketry. European and other ethnic groups' entrance began with fur trappers of the 1820's and accelerated with the gold rush of the 1850's.

The Karuk have many sacred places in and around the planning area. A portion of the Katamiin and Helkau and Cultural Management Areas (CMA) are located in the West Ishi Pishi TAP planning area. The Helkau and Katamiin areas are Traditional Cultural Properties. In early 2012, Six Rivers and Klamath National Forests signed a Memorandum of Understanding with the Karuk Tribe concerning the management and use of the Katamiin CMA. Transportation and facilities management described in the MOU calls for assessing roads for "road decommissioning, upgrades, maintenance activities, or other mitigations that may be needed to protect cultural values." The Helkau District has been confirmed as eligible

for the National Register as a Traditional Cultural Property. The Forest is currently working on updating the eligibility form or undertaking a full National Register Nomination as per the request of the National Register and State Historic Preservation Office at the time of the Determination of Eligibility. A portion of Forest road (13N17) is the only road in the analysis area within the Helkau CMA.

Native Americans continue to use certain forest sites and many of its resources. These include sacred areas used in maintaining their traditional culture. Native Americans, along with decedents of European settlers, are often employed in jobs and activities dependent on current forest commodity production, which is historically linked to economic development, customs and cultures of the area, especially timber production.

The area immediately surrounding the project area is very rural. It has been dependent upon the forest's natural resources for much of its social and economic well-being. These resources link the people and communities of this area to the forest, through employment and incomes. This can affect the lifestyles, population and quality of life. The three main issues that define the social climate are; protection of the environment, stability of the economy, and protection of contemporary Native American cultural activities and values.

This is the social setting for roads decisions. There is a need for roads to access the public land for management of resources, but those roads should be well designed, managed and maintained so they do not generate unacceptable impacts to the physical and biological environment. Public involvement is essential to these planning efforts.

Step 1 – Setting up the Analysis Area

Purpose

The purpose of this step is to:

- Identify the analysis area and state objectives.
- Clarify the roles of technical specialists.
- Develop a process plan and an analysis plan.
- Address information needs.

Analysis Area and Objectives

The TAP will be conducted for a portion of the Ukonom Ranger District, in the Klamath National Forest and administered by the Six Rivers National Forest that is located west of the Klamath River (West Ishi Pishi). (Appendix C Vicinity Map) The objective of the analysis is to provide science-based information for managing roads that are safe and responsive to public needs and desires is efficiently administered, has minimal negative ecological effects on the land, and is in balance with funding available for needed management actions. It also must be consistent with the Klamath National Forest Land and Resource Management Plan. Table 1 lists the acreage and type of management areas within the project planning boundary.

The TAP is intended to be a broad scale comprehensive look at the West Ishi Pishi area transportation network. The primary objectives of the TAP are:

- Balance the need for access while minimizing risks by examining important ecological, social, and economic issues related to roads.

- Furnish maps, tables, and narratives that display transportation management opportunities and strategies that address future access needs, and environmental concerns.
- Identify the need for changes by comparing the current road and system and areas to the desired condition.
- Make recommendations to inform subsequent site-specific project proposals and future NEPA documents.

Table 1. Ukonom Ranger District, Klamath National Forest Plan Management Areas

West Ishi Pishi Management Areas	Acres
General Forest - Matrix	14,848
Late Successional Reserve	16,827
Released Roadless	14,875
Cultural Area	12,000
Riparian Area	11,823
Research Natural Area	536
Recreational River	1,614
Retention VQO	809
Partial Retention VQO	6,528
Privately Owned	487

Role of Specialists

The Analysis Team was assigned by the District Ranger Nolan Colegrove, District Ranger. The team members and their primary discipline or function are listed below in Table 2.

Table 2: Interdisciplinary Team Members

Name	Resource Area and Role
Nolan Colegrove	District Ranger/Line Officer
Julie Ranieri	Public Affairs Officer and Editor
Corrine Black	Water Quality and Writer/IDT Leader
Earl Crosby – Karuk Tribe Representative	Cultural Resources
Leroy Cyr	Fisheries
Kurt Werner	Road Maintenance
Jeff Jones	POC Management
Victor Dumlao	Transportation Planner
Roberto Beltran	Forestry
Bob Hemus	Recreation

Zack Taylor	Fuels and Fire Suppression
Mike Turek	Tribal Relations
Terra Owens	Wildlife
Brenda Devlin	Wildlife
Lisa Hoover	Botany and Invasive Plants
Wes Allen	Archeology
George Frey	Lands and Right of Way
Roberta Coragliotti	Special Use Permits

Analysis Plan

The interdisciplinary team followed these steps in order to carry out the analysis:

- Review and assemble existing data, including the previous Six Rivers and Klamath National Forests Roads Analyses.
- Verify accuracy of system road locations on maps.
- Identify discrepancies between on-the-ground conditions; the Forest's INFRA database and current management direction. Document these conditions and data discrepancies giving priority to safety issues.
- Verify the current conditions of roads, and associated features including safety issues and environmental issues.
- Identify preliminary access and resource issues, concerns, and opportunities.
- Identify additional issues, concerns, and opportunities through previous public involvement and internal resource staffs.
- Review State Vehicle laws.
- Recommend changes to the road system necessary to develop the minimum road system.

Information Needs

Information needs were identified and the analysis team worked to gather as much information as available about the following:

- Accurate location and condition of all system roads within the analysis area.
- For each road need:
    1. Any existing public or agency use.
    2. Current maintenance level.
    3. Any right-of-way dedication or additional required.
- Assessment of previous and current opportunities, problems, and risks for all roads in the analysis area.
- Cultural and Historic Resources.
- Water resources, environmental issues, and biological communities.
- Public access and recreational needs and desires in the area, including access for nearby landowners.
- Current observed road uses.
- Current draft road management objectives.

- Areas of special sensitivity, resource values, or both.
- Best management practices for the area.
- Current forest plan and other management direction for the area.
- Agency objectives and priorities.
- State laws that regulate motor vehicle use on and off public roads.
- Applicable federal, state, and local laws.
- Public and user group values and concerns.
- Forest scale Roads Analysis Process.

Step 2 – Describing the Situation

Purpose

The purpose of this step is to:

- Describe the existing road system.
- Describe the existing direction.
- Describe road maintenance levels.

Existing Road System

The West Ishi Pishi analysis area has approximately 197 miles of road in the analysis area boundary (Table 3). Access throughout the area is solely dependent on National Forest NFTS roads. The Six Rivers NF completed a Forest-Wide Roads Analysis in 2003 that included all maintenance level 3 and 4 and 5 roads.

Table 3 – Miles and Maintenance Level of Forest Roads in the Analysis Area

Maintenance Level	Miles	Percent of Total
1	57	29
2	60	30
3	55	28
Unauthorized	25	13
Total	197	100

A comprehensive road condition inventory for the West Ishi Pishi area was completed in 2010 (*Road Assessment and Restoration Planning in the West Ishi Pishi Watersheds in the Lower Middle Klamath River Basin*). This inventory included information on stream crossing and road drain condition, identified maintenance needs, and provided a general assessment of the potential to adversely impact water quality and fish habitat.

Existing Direction for Roads

A. General

Determine and provide for the minimum forest transportation system that best serves current and anticipated management objectives and public uses of National Forest System (NFS) lands, as identified in the Klamath National Forest Land and Resource Management Plan

(FSM 1920). In managing the forest transportation system for access, Responsible Officials must coordinate with other public and private transportation system agencies to integrate transportation information and to balance transportation facility investments and maintenance costs against the need to maintain land health and water quality.

B. Roads

Open Roads

Existing roads located within the project area are open to the public for motorized use are forest system roads, which are currently in the Forest's INFRA database with the following attributes:

- System = National Forest System Road
- Jurisdiction = Forest Service
- Route Status = Existing
- Operational Maintenance Level = 2-5

Closed Roads

Closed roads have been closed to vehicle traffic for at least a year but are necessary for future activities. They appear in the Forest's INFRA database under the following categories:

- System = National Forest System Road
- Jurisdiction = Forest Service
- Route Status = Existing
- Operational Maintenance Level = 1

Decommissioned Roads

Decommissioned roads have some type of physical closure at their entrance (berm, etc.). They appear in the Forest's INFRA database under the following categories:

- System = National Forest System Road
- Jurisdiction = Forest Service
- Route Status = Decommissioned
- Operational Maintenance Level = 1-5

In order to return a decommissioned road to service as a system road the NEPA process must be followed even when no physical work is required to allow motorized traffic back on the road.

Unauthorized Roads

An unauthorized road is not currently part of the NFTS and is not shown in INFRA database. These roads are usually established by various users over time. Some were not planned, designed, or constructed by the Forest Service; others were constructed for temporary use only.

C. Inventoried Roadless Area

The Siskiyou Inventoried Roadless Area (approximately 14,875 acres) is located within the analysis area. Under the Roadless Area Conservation Final Rule, management actions that do not require the construction of new roads will still be allowed, including activities such as; timber harvesting for clearly defined, limited purposes, development of valid

claims of locatable minerals, grazing of livestock, and off-highway vehicle use where specifically permitted (page 3250 of Volume 66, No. 9 of the Federal Register [36 CFR Part 294]). The Analysis Team has not recommended adding any motorized trails located in the roadless area boundary.

D. Previous Travel Management Decisions

Table 4 summarizes the previous travel management analysis or decisions for the Ukonom Ranger District. Wilderness areas are excluded from the travel analysis process. There are no roads located within the wilderness areas.

Table 4: Previous Travel Management Decisions Relevant to this Analysis

Previous Travel Management Analyses	Miles Assessed	Description
East Ishi Pishi Road Restoration Project Environmental Assessment	317	Analyzed system roads on the Ukonom Ranger District located east of the Klamath River.
Ukonom Ranger District (Included in the Six Rivers NF Roads Analysis, 2003)	115	All Maintenance Level 3-5. Recommendations were made for decommissioning a segment of 14N21 (no longer assessable to motor vehicles due to landslides). This recommendation will be carried through in the West Ishi Pishi TAP.
Motorized Travel Management Environmental Impact Statement (Klamath NF, 2010)	180	No changes or additions to the transportation system in the West Ishi Pishi analysis area were made.

Road Maintenance Levels Analyzed

The West Ishi Pishi Travel Analysis Process includes all maintenance level 1 and 2 roads, unauthorized routes, as well as reviewing the status and current condition of maintenance level 3 roads; 13N13, 13N14, 13N35, and 14N21. There are no ML4 roads included in this analysis because they were previously analyzed with the Six Rivers NF Roads Analysis in 2003. There are no ML5 roads in the analysis area. Table 4 provides a Summary of Road Miles Analyzed by Maintenance Level

Forest Service road management differentiates the following types of maintenance levels that define the level of service required at that maintenance level. The table below lists the total miles of road analyzed by maintenance level.

Road Maintenance Level 3 (ML3) - roads that are open and maintained for travel by prudent drivers in a standard passenger car. Maintenance practices are focused on keeping drainage structures open and roadside brushing of vegetation where necessary to maintain adequate sight distance.

Road Maintenance Level 2 (ML2) – roads that are open for use by high-clearance vehicles and passenger car traffic is not a consideration. Maintenance is focused on keeping drainage structures open, and roadway clear for safe passage. Off-highway vehicle use is currently permitted on all ML 2 roads (approximately 61 miles).

Road Maintenance Level 1 (ML1) – roads that are closed to vehicular traffic intermittently for periods that exceed 1 year. Custodial maintenance is very limited and focused on protecting water quality and the road investment.

Unauthorized Route– Unauthorized routes are not assigned maintenance levels and are not authorized for administrative or public use. Routes are not in the INFRA database, not maintained, and closed year-round to vehicular traffic.

Table 5: Summary of Road Miles Analyzed by Maintenance Level

Maintenance Level (ML)	Analysis Area Total Miles[3]
ML 3 Road	55
ML 2 Road	60
ML 1 Road	57
Unauthorized Route analyzed for the Minimum Road System[4]	25
Total Miles of Roads Analyzed	197

[3] Road miles used in this analysis were populated using values from the INFRA database. These numbers may contain minor discrepancies because of data entry errors.
[4] These are currently unauthorized routes.

Step 3 – Identifying Issues

Purpose

The purpose of this step is to:

- Identify resource concerns.
- Identify key issues related to management of existing road system.

Resource Concerns

Forest roads can be significant sources of sediment (Madej 2001). There are many direct and indirect impacts to aquatic systems associated with road construction and management (Meehan 1991). Some of these environmental impacts can be positive, such as access for recreation and fire management activities. However, roads can have a negative impact to aquatic and cultural resources. For example, the introduction of the POC root disease (*PL*) into the headwaters of Dillon Creek could be devastating to the unique habitat it provides to aquatic species and to traditional cultural use.

The key issues were identified using public involvement and comments. The following are lists of key issues and summary of all public input received.

Key Issues Relating to Resource Risk

- Water quality and fish habitat
- POC root disease
- Cultural and heritage resources
- Wildlife
- Geologic stability

- Invasive plants

Key Issues Relating to Benefits of Access

- Fuels management and fire suppression.
- Vegetation management
- Special uses and right of way issues.
- Recreation and OHV management.

Public Input

Public input was solicited through news releases posted locally in the town of Orleans and sent via email to local media contacts, including the Times-Standard, Eureka, Two Rivers Tribune, Hoopa, Trinity Journal, Weaverville and Siskiyou Daily News, to Yreka. Notice of the project was also sent the Siskiyou County Board of Supervisors followed by a formal presentation to the Board. Also posted on the Six Rivers website was information about the TAP process, road by road listing of resource risks and benefits, criteria used to develop resource ratings and a project area map.

A public meeting was held on February 12, 2013, at the Orleans Elementary School. The objective for the public meeting was; to inform the community about the Transportation Analysis Process being conducted in the West Ishi Pishi area, share results of road by road risk and benefit assessment, gather further information on public road use and resource concerns, and seek help Appendix B summarizes the public comments, questions and concerns documented during public meetings, by email correspondence, hand delivered or through the mail.

Step 4 – Assessing Benefits, Risks and Problems

Purpose

The purpose of this step is to:

- Describe the analysis process.
- Describe the criteria used in the risk and benefit analysis process.
- Describe the scoring and rating.
- Summarize the risk and benefit of existing roads.
- Discuss the statistical distribution of risk and benefit assessment.
- Recommendations for roads.
- Guidelines for mitigating road risks.

The Analysis Process

The analysis was conducted using road condition inventory data that was collected in the summer of 2009 (Road Assessment and Restoration Planning in the West Ishi Pishi Watersheds, Natural Resources Services, RCAA, 2010). Other information was gathered from the Six Rivers National Forest GIS data library or other specialist reports. Categories to determine the overall risk and benefits were identified and criteria developed. Each specialist developed their own resource criteria and ranking system to accurately reflect resource risks

or benefits for each road included in the analysis area. This analysis tiers to the Six Rivers National Forest Roads Analysis (USDA 2003) and uses similar processes for identifying issues and concerns.

Criteria Used in the Risk and Benefit Analysis Process

Criteria for risk were designed to be conservative so that risk was not underestimated. The roads were considered as a whole so that a high risk affecting one segment would rank the entire road as high risk. The same methodology was used to assess the benefits of the road. The table below lists the categories that were selected for analysis of risks and benefits.

Table 6: Resource Categories for Roads

Benefit	Risk
Motorized uses benefit these categories by they providing opportunities	**Motorized use presents risks to resources in these categories**
Vegetation Management	Water Quality
Fuels and Fire Management	Fish and Wildlife Habitat
Dispersed Recreation	POC Root Disease Introduction
Motorized Recreation Opportunities	Cultural Resources
Forest Product Gathering	Geologic Instability
Land and Special Uses	Invasive Plants

ROAD BENEFIT ASSESSMENT CRITERIA

Vegetation Management

There is a potential benefit to keeping access for future vegetation management projects.

High Benefit:

- Multiple opportunities for vegetation treatments within the next 10-20 years (Matrix or LSR).
- Multiple Plantations requiring reforestation or other silvicultural treatments.
- Out-year vegetation treatments planning in progress.

Moderate Benefit:

- Few opportunities for vegetation treatments within the next 10-20 years (Matrix or LSR).
- Few Plantations requiring reforestation or other silvicultural treatments.

Low Benefit:

- Little or no opportunities for vegetation treatments within the next 10-20 years (Matrix or LSR).
- Treatment areas which could be accomplished without motorized access.

Fire and Fuels Management

There is a potential benefit to maintaining access for future fire and fuels management activities.

High Benefit:

- Access to ridge for fire suppression or fuels reduction projects.
- Only one or two access roads into an area.
- Direct access to or close proximity to private property.
- Access to a viable water source.

Moderate Benefit:

- May be one of several roads accessing an area.
- Access to a potential fuels project.

Low Benefit:

- Short spurs with limited access.
- One of many roads into an area, or one of several stacked roads.

Recreation Management

There is a potential benefit to maintaining access to recreation sites or recreational activities.

High Benefit:

- Only access to a facility or opportunity.
- Road provides a unique opportunity not available elsewhere in the area.
- Serves as part of a *loop* route.
- Only route in the area that is suitable for off-highway vehicle use.

Moderate Benefit:

- More than one access to facility or opportunity.
- Similar opportunity occurs elsewhere on the district.
- More than one opportunity for *loop* routes or off-highway vehicle use.

Low Benefit:

- Many accesses or many similar opportunities occur elsewhere.
- More suited for non-motorized use (biking, hiking).

ROAD RISK ASSESSMENT CRITERIA

Water Quality and Fish Habitat

There is the potential for road-related sedimentation or erosion to affect water quality and fish habitat.

High Risk:

- Roads not accessible by motorized vehicles (presumed little to no routine maintenance is performed). More than 2 undersized stream crossings with diversion potential and located in the upper hillslope position.
- 1 undersized stream crossing with diversion potential and located in the middle or lower hillslope position.
- Close proximity to perennial streams and key anadromous habitat.
- Designated Critical Habitat for Coho.

Moderate Risk:

- Roads with 1 or more undersized culvert with diversion potential.
- Roads with notable erosional features that have the potential to affect water quality.

Low Risk:

- Roads that do not have any culverts or road drains.
- Generally located in the upper hillslope position.
- Minor erosional features may be present but with little risk of affecting water quality.

Active and Potential Geologic Instability

There is potential for sedimentation or erosion to affect water quality and fisheries habitat.

High Risk:

- Active landsliding documented.
- Hillslope position or proximity to aquatic features elevates risk of sediment delivery.

Moderate Risk:

- Dormant landslide activity only.
- Hillslope position or distance from aquatic features reduces risk of sediment delivery.

Low Risk:

- Little to no active or dormant landslide activity documented.

Port Orford cedar Root Disease Introduction

There is the potential to spread Port Orford cedar root disease from infected mud on vehicles.

High Risk:

- Roads containing segments within 100 feet of infected Port Orford cedar stands
- Roads containing segments within 100 feet of uninfected *wet* (within 50 feet of perennial or intermittent stream) Port Orford cedar stands without at least a seasonal road closure in place.
- Roads containing segments within 50 feet of uninfected *dry* (at least 50 feet away from perennial or intermittent stream). Port Orford cedar stands without at least a seasonal road closure in place.

Moderate Risk:

- Roads containing segments within 100 feet of uninfected *wet* Port Orford cedar stands with a seasonal road closure in place.
- Roads containing segments within 50 feet of uninfected *dry* Port Orford cedar stands with a seasonal road closure in place.

Low Risk:

- Roads containing segments within 100 feet of uninfected *wet* Port Orford cedar stands with a permanent road closure in place.
- Roads containing segments within 50 feet of uninfected *dry* Port Orford cedar stands with a permanent road closure in place.
- Roads containing no segments within 100 feet of infected or uninfected *wet* Port Orford cedar stands and roads containing no segment within 50 feet of uninfected *dry* Port Orford cedar stands.

Wildlife

There is potential risk to TES wildlife and their habitats from direct impacts and habitat fragmentation.

High Risk:

- Road directly accesses occupied NSO or Raptor activity centers and has the potential to introduce disturbance during critical nesting periods. Activity center is located near roads that are not heavily used and wildlife is accustomed to low levels of background noise.

Moderate Risk:

- Road indirectly access occupied NSO or Raptor activity centers or the potential to introduce disturbance is less because of the proximity to roads that are somewhat more commonly used and wildlife is accustomed to moderate levels of background noise.

Low Risk:

- Road does not access any NSO or Raptor activity centers, or AC is not currently occupied, or the road currently has a higher background level of noise due to the proximity to more frequently used roads. Wildlife is considered to have become accustomed to higher levels of background noise.

Invasive Plants

There is the potential to spread invasive plant seeds from mud on vehicles.

High Risk:

- Road is a maintenance level 2 (open to the public) and invasive plants are present at moderate to high cover values in or proximal to the road prism.

Moderate Risk :

- Road is unauthorized or maintenance level 1 (closed to all users) and invasive plants are present at moderate to high cover values in or proximal to the road.
- Road is a maintenance level 2 and noxious weeds are present at low to moderate cover values in or proximal to the road prism.

Low Risk:

- Road is unauthorized, maintenance level 1 or 2 road and inventories have resulted in little to no findings of invasive plants in or proximal to the road prism.
- Road dissects highly serpentinized soils (less fertile soils).

Final Ratings

Overall road condition along with all resources risk and benefit ratings were assembled in a table format and presented to the public for comment. See Appendix D for complete listing of roads and associated risk or benefit ratings. The table below is a summary of all benefit and risk ratings.

Table 7 Distribution of Risk and Benefit Assessment

	Low Benefit		Moderate Benefit		High Benefit	
	Number	Miles	Number	Miles	Number	Miles
High Risk	8	6	5	4	46	117
Moderate Risk	2	.1	7	1	47	39
Low Risk	4	.4	12	3	41	14

Guidelines for Mitigating Road Risks

- Improve (stormproof) roads with high benefit and high risk to be more resilient during large storm events.
- Decommission roads with high risk and low or moderate benefit.
- Place roads in storage for future use while reducing maintenance needs.
- Continue inventory efforts to evaluate the extent of noxious weeds.
- Incorporate noxious weed prevention and control into road maintenance.
- Treat non-native invasive species before roads are decommissioned; follow-up based on initial inspection and documentation.
- Close or seasonally restrict road use to minimize potential for introduction of POC root disease.
- Continue efforts to evaluate the extent of POC root disease.

Step 5 – Describing Opportunities and Setting Priorities – Minimum Road System

Purpose

The purpose of this step is to list:

- Opportunities and priorities that would implement the minimum road system.
- Opportunities that respond to the issues.

Opportunities and Priorities that Would Implement the Minimum Road System

The Minimum Road System

The West Ishi Pishi Analysis Team recommended a minimum road system following the direction in 36 CFR 212.5 (b).

36 CFR 212.5 (b) (1) is a portion of the Travel Management Rule and it states:

> "…b) Road system--(1) Identification of road system. For each national forest, national grassland, experimental forest, and any other units of the National Forest System (§212.1), the responsible Official must identify the minimum road system needed for safe and efficient travel and for administration, utilization, and protection of National Forest System lands. In determining the minimum road system, the responsible official must incorporate a science-based travel analysis at the appropriate scale and, to the degree practicable, involve a broad spectrum of interested and affected citizens, other state and federal agencies, and tribal governments. The minimum system is the road system determined to be needed to meet resource and other management objectives adopted in the relevant land and resource management plan (36 CFR part 219), to meet applicable statutory and regulatory requirements, to reflect long-term funding expectations, to ensure that the identified system minimizes adverse environmental impacts associated with road construction, reconstruction, decommissioning, and maintenance."

The West Ishi Pishi Travel Analysis Process incorporates recommendations from the Six Rivers NF Roads Analysis that was completed in 2003. This analysis incorporates recommendations for existing objective ML 3 and 4 passenger car roads. The following ML 3 and 4 roads are priorities for maintenance and essential components to the minimum road system. These roads are; 14N51 (Dillon Creek Campground Road), 14N69 (paved portion of Sidewinder Road), 13N18 (Donahue Flat Road) and 15N01 (Eyesee Road). Some ML 3 roads are being recommended for downgrading to ML 2.

A final consideration in developing the minimum road system is road maintenance. Based on normal (not including storm damage repair funds) funding levels over the previous eight years, the Forest can only afford to maintain about 10% of the existing system (See Appendix E). Creating a future road system to match the available or anticipated funds by simply closing or decommissioning roads will not result in a minimum road system needed for safe and efficient travel and for administration, utilization, and protection of National Forest System lands.

Opportunities that Respond to the Issues

The following section describes strategies that the Forest may choose to employ in projects and situations where the issues occur (see Chapter 3). The scale at which these actions may be implemented is dependent on the site and the compatibility of the action with the overall management focus of the surrounding area. The list below is intended to provide options that project leaders and decision-makers may consider when implementing changes to the road system

Issue: Reducing road miles adversely impacts public access

Opportunity: Add short segments of currently unauthorized routes that provide access to dispersed recreation sites.

Issue: Reducing road miles adversely impacts administrative access

Opportunity: Consider placing roads in storage to save on maintenance cost while preserving future opportunities for use.

Issue: Interpretation of the Motorized Vehicle Use Map

Opportunity: Provide information and education about motor vehicle regulations and responsible use of motorized vehicles on the National Forest. Install information board at the Orleans Ranger Station, area trail heads, recreation sites, and parking areas.

Opportunity: Develop and utilize public relation strategies that will help to increase public awareness and understanding of the Motor Vehicle Use Maps.

Issue: Insufficient resources for maintenance of the existing system roads

Opportunity: Reduce the number of road miles that need to be maintained or reduce the maintenance level to reduce the maintenance unit cost.

Opportunity: Leverage funds/efforts to increase maintenance capabilities. Seek opportunities to increase the amount of maintenance accomplished.

Issue: Continued use of unauthorized routes

Opportunity: Employ devices such as signs and physical barriers which discourage continued travel. Natural devices (downed trees, boulders, etc.) are preferred in most cases, but in situations where previous decommissioning efforts have been unsuccessful, more aggressive means may be employed.

Opportunity: Monitor decommissioned roads after the implementation of barriers and other mitigation measures. Keep records of successful and unsuccessful strategies for discouraging travel to improve future rehabilitation projects.

Issue: Environmental impacts

Opportunity: Reduce the number of road miles that have the potential to adversely impact water quality and fish habitat.

Opportunity: Reduce the number of road miles that have the potential to adversely impact cultural resources.

Opportunity: Place seasonal restrictions or reduce number of open road miles going through areas of uninfected POC stands.

Opportunity: Reduce the number of road miles in sensitive wildlife areas.

Opportunity: Reduce the number of road miles where there is the potential of increasing invasive plant populations.

Step 6 – Reporting

Purpose

The purpose of this step is to report the key findings of the analysis.

Key findings of the Analysis

Roads were assessed based on their *risks* to natural and cultural resources and their *benefits* to recreation use, forest products access, and emergency fire suppression access. As a result of the TAP, the Analysis Team does *not* recommend changes to approximately 18% of ML 2 status roads. The Analysis Team does recommends that approximately 20% of all roads analyzed should be decommissioned, 23% closed to use (ML 1 status), 10% upgraded to ML 2 status and 23 miles (12%) unauthorized routes be restored. The Analysis Team also recommends that approximately 83% of the current system should be mitigated (stormproofing) to reduce resources risk. See Appendix F for a map which represents the final TAP recommendations.

The minimum road system in this document is the Analysis Team's recommendation only. During subsequent NEPA processes, roads may be added or deleted from the existing road system in order for the Forest to achieve the minimum road system.

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Appendix A – Summary of Travel Analysis Process

Why Travel Analysis?

The ability to affordably provide safe access, for the most benefit, with the least harm to the environment, is becoming more difficult. The National Forest Transportation System of roads is deteriorating due to age and reduced maintenance. The number of visitors has increased, placing an even greater demand on the road system.

The core of Travel Analysis is national forest access by roads. Some forest visitors feel that unrestricted access is a non-negotiable right. Memories of access to remote, favorite places and activities may extend back generations. Other visitors may feel that forests should not have as much motorized access, perhaps also with memories extending back generations, memories of quiet enjoyment and solitude. Still more are visitors with both perspectives. To some degree, all feel ownership in these public lands, and don't want to see their use and enjoyment threatened, diminished, or eliminated. There is a need to involve all publics together, to look at the opportunities for a realistic, sustainable road system that considers current and future access needs.

What is Travel Analysis?

Travel Analysis is the Forest Service's science-based process developed in response to the 2005 Travel Management Rule 36 CFR 212. The Rule has three subparts: Subpart A — Administration of the Forest Transportation System; Subpart B - Designation of Roads, Trails and Areas for Motor Vehicle Use; and Subpart C — Use by Over-Snow Vehicles. The Rule has existed for many years with varying subparts prior to the 2005 Travel Management Rule, and it has been updated several times, most recently in 2005. Along with Part 212, Parts 251 (Land Uses), 261 (Prohibitions), and 295 (Use of Motor Vehicles off National Forest System Roads) were updated to provide national consistency and clarity on motor vehicle use with the National Forest System.

In response to direction to regulate motor vehicle travel by the public, National Forests in California completed their National Environmental Policy Act (NEPA) decisions related to route designation required by Subpart B. As stated throughout the Travel Management effort (response to Subpart B), Forests would subsequently start the process that will lead to identification of the minimum road system. The start of that process, Travel Analysis, is a current focus of the Pacific Southwest Region.

What Will the Analysis Provide?

Travel Analysis will inform future decisions for designation of roads. The analysis will provide a whole-forest view of all the National Forest Transportation System roads and will involve those who use and are affected by the roads. It will allow for a forest-scale integrated view of the issues, risks, and benefits for users and forest resources associated with the National Forest Transportation System roads. Opportunities identified must support objectives of relevant land and resource management plans. The analysis process uses ecological, social, cultural and economic information. It complements and informs other processes.

Together with input from interested and affected individuals, Tribal governments, government agencies, as well as Forest Service employees, the analysis will produce a comprehensive list of opportunities for potential changes to the road system. Those opportunities could be to change road operation strategies, decommission, convert to other use, relocate, or add to the road system.

Travel Analysis is Not NEPA

Unlike an analysis performed to comply with NEPA, Travel Analysis doesn't result in a decision with a selected alternative to be implemented. The final product from Travel Analysis is a report, which will display findings as opportunities and recommendations to inform future management and administration of the National Forest Transportation System.

The requirements for public involvement under Travel Analysis are not the same as they are for NEPA analysis. Travel analysis allows for each forest to craft their public engagement strategy, sequence, and schedule to mesh with the six-step process. While responses to Public comments and their input are not required, that does not diminish the need to involve the Public and consider their input during Travel Analysis. Also, since there is no decision to be implemented, the Travel Analysis report cannot be appealed.

Public Involvement

The Travel Management Rule generated a very high level of interest, not only from the general public, but from Tribal governments and all levels of government agencies. Each forest that prepared their Final Environmental Impact Statement (FEIS) for designation of roads, trails, and areas for motorized use followed NEPA requirements for public involvement. Communication with interested individuals, groups, Tribal governments, stakeholders, local, state, and federal agencies varied by forest. But one message was very clear: Forest Service communication did not meet public expectations in all cases.

As we go through the Travel Analysis Process, the Pacific Southwest Region is committed to involving the public, Tribal governments, local, state and other federal agencies, and other stakeholders in this effort. Various locations along the Six-Step Travel Analysis lend themselves perfectly to involving the public:

Travel Analysis Steps and Public Involvement

Step 1 – *Setting up the Analysis*: Media releases, roll out/open house, external website information, request information since MVUM publication, new data, etc.

Step 2 – *Describing the Situation*: Sharing existing road system inventory (not just MVUM), access needs, review of past decisions, display of available road Operation and Maintenance resources, etc.

Step 3 – Identifying Issues: Request key issues, concerns; share management concerns and legal constraints.

Step 4 – *Assessing Benefits, Problems and Risks*: Share methods for assessing benefits and risks with the Public, acknowledge conflicts.

Step 5 – *Describing Opportunities and Setting Priorities*: Explain range of opportunities, why they are important, emphasize they are not decisions.

Step 6 – *Reporting*: Maps, tables, opportunities available in multitude of locations, hard copy, electronic, published, etc. The contents of the Travel Analysis Report should not be a surprise to the Public.

At a minimum, each forest will engage with interested individuals and stakeholders, Tribal governments, special interest groups, and local, county, state, and other federal agencies. In addition to sharing the goals and process of Travel Analysis with external parties, the forests will invite them to share their issues, knowledge, information, and suggestions regarding the roads of the National Forest Transportation System. Their input will enhance our understanding, knowledge, and analysis

of the National Forest road system. Their shared issues, wants and needs, and identified risks and benefits pertaining to roaded access will be folded into the science-based analysis. Their contributions will be considered as the forest develops opportunities for addressing expressed risks and benefits.

Each forest will refine their own communication plan, specific to their location and affected internal and external stakeholders/participants. The means of communication can include personal contacts, meetings, conferences, media releases, field trips, etc. Use of social media and websites are also encouraged as a means to reach individuals that are interested, but not available locally to give input

The public involvement will be needed at various steps during the analysis: initially, they will be recipients of the information to be shared about Travel Analysis, the process, and how to participate. From there, five of the six steps have an element that can benefit from public involvement: contribution to or validation of current data; expression of access needs; identification or affirmation of issues and concerns; description of benefits, problems, and risks; and suggestions of opportunities for changes.

Because this is a forest scale analysis, and not a decision-type process, it does not seek to reach consensus. Travel Analysis will look at all the information available on roads, in addition to that provided by involved publics, and report where issue, risks, benefits, and opportunities associated with roaded access are present.

Appendix B – Summary of Public Input

Coordinate with Klamath NF managers, Mid-Klamath and Salmon River Restoration Councils, and Hoopa and Karuk Tribes.
Hold public meetings and discuss methods and alternatives to prevent the road system from facilitating illegal activities (including marijuana grows).
All roads not needed for immediate management or used by major segments of the public on a regular basis, should be closed with tank traps and put into hydrologic storage.
Gates are not effective, tank traps are.
Consider a "forest watch" type program designed to encourage local community to report illegal marijuana grows.
Metal gates to protect POC during the wet season have proven ineffective. Consider using tank traps as an alternative to gates.
Failed in keeping gates closed on maintenance level 1 and 2 roads, resulting in unacceptable damage to fisheries and water quality. (Photo of Monte creek road system as an example).
Develop alternative that effectively addresses the problem of damage and violation of law, regulation and policies of the FS.
Identify those roads which are open for use during wet weather and do not receive regular maintenance.
What is the cost, in terms of damage to the road system that has been incurred by leaving unmaintained roads open during the wet weather season?
Disclose how much sediment has been delivered to streams as a result of leaving unmaintained roads in the analysis area open during wet weather.
Email received of comments submitted to Bill Rice (Former Orleans District Ranger) concerning the Orleans Transportation and Road Restoration Project Environmental Assessment (USDA 2007).
Support of national and regional efforts to comply with Subpart A of the Travel Management Rule (36 CFR 212.5(b)).
What is the public involvement schedule for all planning areas on the forest? Is there public involvement for each of the 6 steps of the TAP?
Interest in methods to be used during step 4.
13N18 (Donahue Flat), 13N13 and other roads in-between up to Dillon Creek (13N35) are primary access for Karuk Elders and other Karuk practioners to gather cultural materials and traditional foods, so good maintenance and access are important.
Road access/closures (winter weather in rainy season): need to keep up with the best strategies to prevent introduction/spread of Sudden Oak Death via traffic.
Marijuana: support of previous public comments concerning road access/closures to counteract marijuana grows on USFS forests.
Frustration with lack of ability of the agency to actively manage the forest for community and resource benefits. Concern that a large part of the road network currently available for management will be "put to bed".
Road decommissioning increases the risk for catastrophic fire over large portions of the Orleans and Ukonom Ranger Districts.
Available science related to the threat of sediment to salmon and steelhead does not support the need to reduce sediment input to streams. Are there studies that identify over-sedimentation as a limiting factor to fish populations? If so, wants to see them. Spending taxpayer money implementing projects

that reduce our ability to manage these forests.
Fuelbreaks created in the 2008 fires need to be maintained and strengthened. Need projects to address threats to plantations before roads are decommissioned. Fires destroy NSO suitable habitat. Too many stems per acre and will be converted to brush fields in the next large fire.
How does decommissioning roads for protecting one threatened species (Coho salmon) at the expense of another (NSO) being weighted?
Work with FWS and evaluate analysis in the context of the new proposed critical habitat listing for NSO.
Must analyze where roads, firelines and fuel breaks are needed and where selective thinning is needed to maintain these constructed features. Complete a Cumulative Watershed Effects (**CWE)** assessment of the effects of all past road decommissioning on the agency's ability to manage for wildfire and wildlife habitat
Use best available science to re-evaluate if these funds are being spent in the right place.
Concern about OML 1 designation and the 'road storage' concept. OML1 roads should have all culverts removed, but roadbed left intact for future use.
Abandoned roads (roads that do not receive routine road maintenance) should either be upgraded or decommissioned.
14N21 and 14N21D have knapweed sites that Mid Klamath Watershed Council has been treating and this should be noted in the road by road summary list. 13N13 also being treated for scotch broom and yellow star thistle. This is an important road to the community for gathering, hunting and recreation. Agree with the recommendation to upgrade stream crossings.
Discuss this project plan with the Orleans Fire Safe Council to coordinate identification of high valued roads for fire management.
Overlay Late Successional Reserve and Matrix land allocations when planning future use of roads.
Implement other Timber Sale projects to generate funds and help with backlog of deferred road maintenance costs.
Need to keep access to 13N17 because it has spiritual trail about 2/3 the way down the road that leads to Medicine Mountain.

Appendix C – Vicinity Map

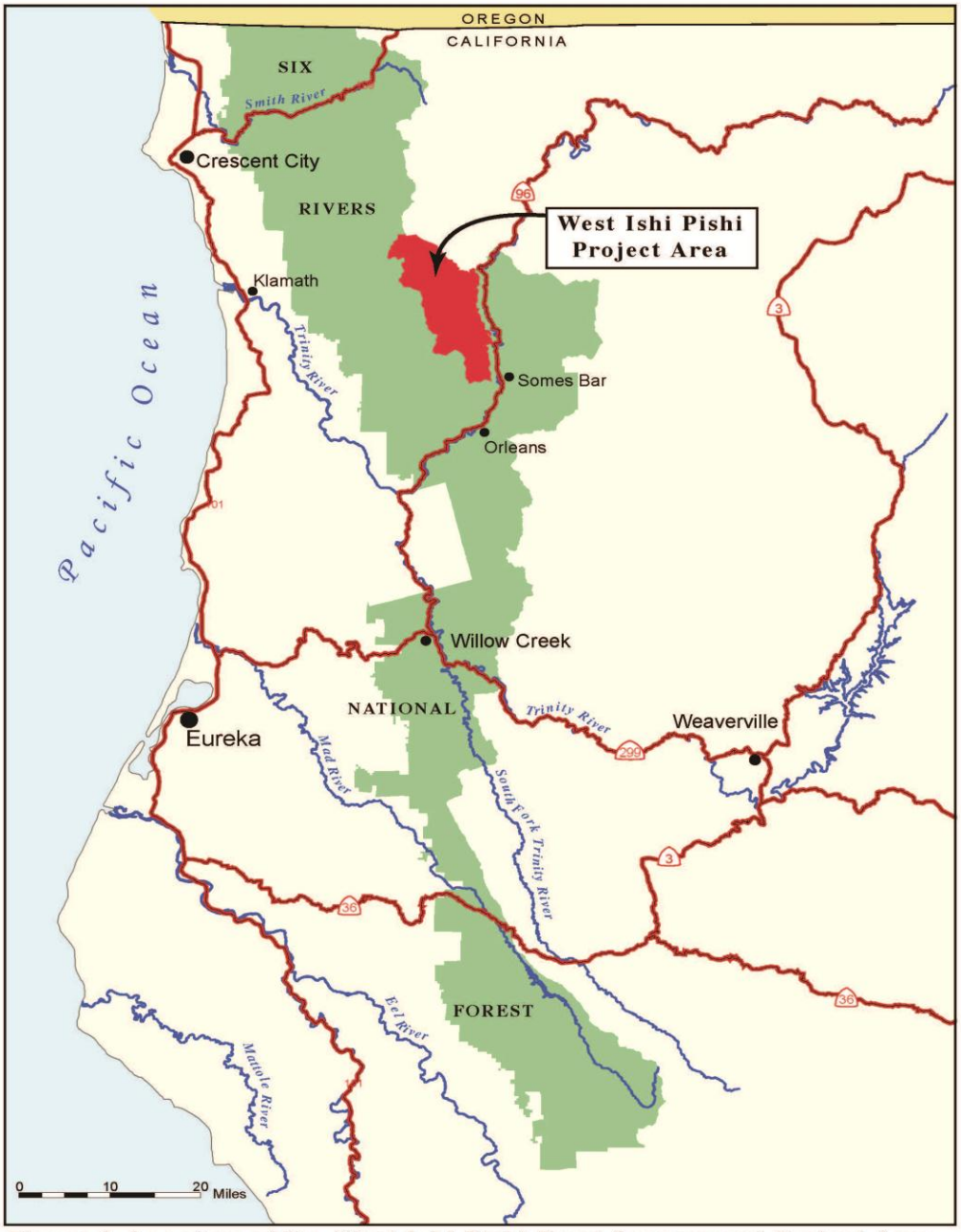

Figure 1. Location of the West Ishi Pishi Road Assessment Project Area.

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Appendix D – Route Specific Risk/Benefit and Recommendations

The following table summarizes the overall risk and benefits were identified and criteria developed. Each specialist developed their own resource criteria and ranking system to accurately reflect resource risks or benefits for each road included in the analysis area. This analysis tiers to the Six Rivers National Forest Roads Analysis (USDA 2003) and uses similar processes for identifying issues and concerns. For more information see Step 4 – Assessing Benefits, Risks and Problems on page 11.

Road Characteristics			West Ishi Pishi Analysis Area	Access Benefit			Resource Risk					
Route ID	Length (miles)	Objective (Planned) ML	Description	Fire and Fuels	Recre-ation	Veg Mgmt	Water Quality & Fisheries	POC Root Disease	Active and Potential Instability	Invasive Plants	Wild -life	Recommendations
11N01	0.4	2	Short near-ridge road. No major erosional features or corrugated metal pipes (CMPs) present. Accessible with 4WD.	L	L	H	L	L	L	L	L	Keep as Maintenance Level 2
11N01A	0.46	2	Short near-ridge road to landing. No major erosional features or CMPs present. Accessible with 4WD.	H	L	H	L	L	M	L	L	Keep as Maintenance Level 2
12N03	1.4	1	Steep ridge/ near-ridge road with mixed drainage pattern - primarily insloped or flat. No major erosional features or CMPs present. Accessible with 4WD.	H	L	H	L	L	L	L	L	Keep as Maintenance Level 1
12N03.1	0.55	UA	Steep spur off the 12N03. Brushy.	H	L	M	H	L	H	L	L	Restore
12N04	1	1	Short ridge to near-ridge road between the 12N19 and 15N01. Accessible with 4WD.	H	L	H	M	L	L	L	L	Upgrade to Maintenance Level 2 and Stormproof.
12N06	2.8	2	Long midslope road that parallels 15N01. There are 4 high priority sites. Walking access only due heavy brush.	M	L	H	H	L	H	L	L	Keep as Maintenance Level 2 and Stormproof.
12N15	2.2	2	Near ridge to midslope road. There are 5 high priority sites including cross drains that are plugged. Accessible with 2WD.	M	L	H	H	L	M	L	L	Keep as Maintenance Level 2
12N15.1	0.15	UA	Short spur Walking access only.	L	L	H	L	L	M	L	L	Restore
12N16	0.4	1	Short near ridge road to small landing. Road and landing heavily vegetated. No major erosional features or CMPs present. Walking access only.	L	L	M	L	L	L	L	L	Decommission
12N16A	0.2	1	Short spur road that appears to be decommissioned or abandoned. Roadbed not existing after milepost 0.20. No major erosional features or CMPs present. Walking access only.	L	L	M	L	L	L	L	L	Decommission

Road Characteristics			West Ishi Pishi Analysis Area	Access Benefit			Resource Risk					
Route ID	**Length (miles)**	**Objective (Planned) ML**	**Description**	**Fire and Fuels**	**Recre-ation**	**Veg Mgmt**	**Water Quality & Fisheries**	**POC Root Disease**	**Active and Potential Instability**	**Invasive Plants**	**Wild -life**	**Recommendations**
12N17	6.7	2	Long midslope road. Rolling dips at mile posts 0.41, 1.00, 1.15, 2.30, 2.75, 3.25, 6.41). Accessible with 2WD.	H	M	H	M	L	M	L	L	Keep as Maintenance Level 2 and Stormproof.
12N17.1	0.35	UA	Short midslope road to large landing. Install rolling dips or waterbars to assist with drainage or decommission road. Walking access only.	L	L	M	H	L	M	L	L	Restore
12N17C	1.3	1	Midslope road to small landing/overlook. 1 undersized CMP with diversion potential (12N17C-0.65). Accessible with 4WD.	M	L	H	M	L	M	M	L	Keep as Maintenance Level 1
12N17D	0.6	2	Short mid-slope road to very small landing. Drainage pattern mixed and roadbed stable. Accessible with 4WD but walking access only after mile post 0.56.	L	L	H	M	L	M	L	L	Downgrade to Maintenance Level 1
12N19	4.7	1	Total road length is 6.7 miles. This first 4.7 miles road drainage is working well with frequent drainage features present. Eight new rolling dips have been installed. Accessible with 2WD.	H	L	H	M	L	M	L	L	Keep as Maintenance Level 2 and Stormproof.
12N19	2	1	This last 2 mile segment of 12N19 is accessible with 2WD but last .5 miles of this segment is bermed off.	H	L	H	M	L	M	L	L	Decommission
12N19.1	0.2	UA	Short ridge road to small landing/ overlook. Road bermed at beginning. No major erosional features or CMPs present. Walking access only.	L	L	M	L	L	L	L	L	Restore
12N19.2	0.2	UA	Short near ridge road to landing. No major erosional features or CMPs present. Walking access only.	L	L	H	L	L	H	L	L	Restore
12N19.3	0.19	N/A	No major erosional features or CMPs present. Walking access only.	L	L	M	L	L		L	H	Restore
12N19E	0.7	1	No major erosional features or CMPs present. Walking access only.	L	L	H	L	L		L	L	Keep as Maintenance Level 1

Road Characteristics			West Ishi Pishi Analysis Area	Access Benefit			Resource Risk					
Route ID	**Length (miles)**	**Objective (Planned) ML**	**Description**	**Fire and Fuels**	**Recre-ation**	**Veg Mgmt**	**Water Quality & Fisheries**	**POC Root Disease**	**Active and Potential Instability**	**Invasive Plants**	**Wild -life**	**Recommendations**
12N19F	0.6	1	Near ridge road to small landing. No major erosional features or CMPs present. Walking access only.	L	L	M	L	L	L	L	L	Keep as Maintenance Level 1
12N22	0.8	2	Total road length is 3.3 miles. This segment provides access road to "Bean Camp" and is rocked and well-maintained.	M	M	H	L	L	H	L	L	Keep as Maintenance Level 2
12N22	2.5	2	The next 2.5 miles of 12N22 is not well maintained. Road is accessible with 2WD till mile post 1.60. Walking access only afterwards.	M	M	H	H	L	H	L	L	Decommission.
12N22.1	0.34	UA	No real drainage pattern but road surface runoff is drained by old waterbars and outsloped sections. No major erosional features or CMPs present. Walking access only.	H	M	M	L	L	M	L	L	Restore
12N22.2	0.04	UA	Short road to dispersed camping at "Bear Camp". No major erosional features or CMPs present. Accessible with 2WD.	L	M	M	L	L	M	L	L	Add as Maintenance Level 2
12N22.3	0.04	UA	Short road to dispersed camping at "Bear Camp". No major erosional features or CMPs present. Accessible with 2WD.	L	M	M	L	L	M	L	L	Add as Maintenance Level 2
12N22.4	0.05	UA	Short road to campground at "Bear Camp". Drafting pond at end of road. No major erosional features or CMPs present. Accessible with 2WD.	L	M	H	L	L	M	L	L	Add as Maintenance Level 2
12N22A	1	2	Midslope road to landing. Heavy vegetation makes walking difficult. There are also 2 undersized culverts with diversion potential.	M	L	H	H	L	M	L	L	Keep as Maintenance Level 2 and Stormproof.
12N22B	0.4	2	Midslope road with gentle grade to landing. No major erosional features or CMPs present. Accessible with 4WD.	L	L	H	L	L	M	L	L	Keep as Maintenance Level 2

Road Characteristics			West Ishi Pishi Analysis Area	Access Benefit			Resource Risk					
Route ID	**Length (miles)**	**Objective (Planned) ML**	**Description**	**Fire and Fuels**	**Recre-ation**	**Veg Mgmt**	**Water Quality & Fisheries**	**POC Root Disease**	**Active and Potential Instability**	**Invasive Plants**	**Wild -life**	**Recommendations**
12N25	0.7	2	Mostly outsloped road with some minor gullying/ sloughing of road fill. Latter half of road heavily vegetated (walking only) and large rocks on road. No major Erosional features or CMPs present.	M	L	H	L	L	M	L	L	Downgrade to Maintenance Level 1
12N25A	0.3	2	Heavily vegetated with no real drainage system. No major erosional features or CMPs present. Walking access only.	M	L	H	L	L	L	L	L	Downgrade to Maintenance Level 1
12N27	0.8	2	Midslope road to landing. There are unmaintained culverts draining ephemeral channels. Roadbed is stable with little erosion. Walking access only.	L	L	H	H	L	M	L	L	Downgrade to Maintenance Level 1
12N31	0.3	2	Short mid-slope road; no drainage pattern; some small rilling on road surface. No major erosional features or CMPs present. Walking access only.	L	L	H	L	L	M	L	L	Decommission
12N31A	0.3	2	Short ridge road. Heavily vegetated with no real drainage system. No major erosional features or CMPs present. Walking access only.	L	L	H	L	L	L	L	L	Decommission
12N36	0.4	2	Short ridge road to small landing. Road mostly outsloped with 2 rolling dips. No major erosional features or CMPs present. Accessible with 4WD.	L	L	H	L	L	L	L	L	Downgrade to Maintenance Level 1
12N39	0.7	2	Near ridge to ridge road. Heavy vegetation. No major erosional features or CMPs present.	M	L	H	L	L	L	L	L	Downgrade to Maintenance Level 1
12N39A	0.2	2	Near ridge to ridge road. Could not locate in field due to heavy brush. At mapped exit point on 12N39, there was no evidence of erosion or excessive runoff.	L	L	H	L	L	L	L	L	Downgrade to Maintenance Level 1

Road Characteristics			West Ishi Pishi Analysis Area	Access Benefit			Resource Risk					
Route ID	**Length (miles)**	**Objective (Planned) ML**	**Description**	**Fire and Fuels**	**Recre-ation**	**Veg Mgmt**	**Water Quality & Fisheries**	**POC Root Disease**	**Active and Potential Instability**	**Invasive Plants**	**Wild -life**	**Recommendations**
12N40	0.3	2	Near ridge to ridge road. Road reopened in 2008 as a fuel break during a fire. There is a dozer line extending down ridge. At mile post 0.20 there is a small undersized tank trap. Road beyond this point is new construction.	L	L	M	L	L	L	L	L	Keep as Maintenance Level 2
12N40.0	0.17	UA	Short near ridge road. No CMP's.	L	L	M	L	L	M		L	Restore
12N53	3.4	1	Near ridge to midslope road. Road is bermed at mile post 1.20. (Rolling dips at mile posts 0.79 and 0.86). Walk-in access only.	H	L	H	H	L	M	L	L	Keep as Maintenance Level 1
12N53.1	0.33	UA	Short ridge road ending at hillslope. Drainage is waterbars spaced frequently along road and some outsloping. No major erosional features or CMPs present. Accessible with 4WD.	M	L	M	L	L	L	L	L	Add as Maintenance Level 1
12N53.2	0.43	UA	Short near-ridge spur road to small landing. Tank trap at beginning of road. No major erosional features or CMPs present. Walking access only.	L	L	H	L	L	M	L	L	Restore
12N53A	0.4	1	Short mid slope spur road connecting two landings. No major erosional features or CMPs present. Walk-in access only.	L	L	H	L	L	L	L	L	Keep as Maintenance Level 1
12N53B	0.6	1	Short spur road to a series of landings. No major erosional features or CMPs present. Accessible with 4WD.	H	L	H	L	L	L	L	L	Keep as Maintenance Level 1
12N53D	1	1	Short near ridge road ending at hillslope. Walking access after .25 miles. Roadbed stable with little to no risk of sediment delivery to stream network.	M	L	H	H	L	M	L	L	Keep as Maintenance Level 1
12N54	1	1	Short ridge road connecting to 12N17. Accessible with 4WD.	M	L	H	L	L	M	L	L	Keep as Maintenance Level 1

Road Characteristics			West Ishi Pishi Analysis Area	Access Benefit			Resource Risk					
Route ID	**Length (miles)**	**Objective (Planned) ML**	**Description**	**Fire and Fuels**	**Recre-ation**	**Veg Mgmt**	**Water Quality & Fisheries**	**POC Root Disease**	**Active and Potential Instability**	**Invasive Plants**	**Wild -life**	**Recommendations**
12N55	3.5	2	Total road length is 4.0 miles. Long, near ridge to midslope road. This section of 12N55 is 2WD access and maintained. Last half is walk-in access due to vegetation. Multiple unmaintained culverts with diversion potential are undersized.	H	L	H	H	L	M	L	M	Keep as Maintenance Level 2 and Stormproof.
12N55	0.57	2	This last segment of 12N55 has one high priority stream crossing.	H	L	H	H	L	M	L	M	Decommission
12N55.1	0.26	UA	Short, near-ridge road to landing. No major erosional features or CMPs present. Accessible with 4WD.	L	L	H	L	L	M	L	L	Restore
12N55A	0.9	2	Short near ridge road. No real drainage pattern except some waterbars. Heavily vegetated on last 1/4 of road. No major erosional features or CMPs present. Accessible with 4WD.	M	L	H	M	L	M	L	L	Downgraded to Maintenance Level 1
12N55A.1	0.18	UA	Short ridge road to small landing. No major erosional features or CMPs present. Accessible with 4WD.	L	L	H	L	L	M	L	L	Restore
12N55C	0.6	2	Midslope road to landing. No major erosional features or CMPs present. Walking access only.	H	L	H	L	L	M	L	L	Keep as Maintenance Level 2
12N56	1.1	2	Short ridge road to small landing. Outsloped drainage with some minor gullying and ponding in tire ruts. No major erosional features or CMPs present. Accessible with 4WD.	H	L	H	L	L	M	L	L	Keep as Maintenance Level 2
12N56A	0.5	1	Short ridge road. No drainage pattern. Roadbed stable with some minor gullying. No major erosional features or CMPs present. Walking access only.	M	L	H	L	L	L	L	L	Keep as Maintenance Level 1
12N56.1	0.07	UA	Short ridge road. No drainage pattern.	L	L	L	L	L	L	L	L	Restore

Road Characteristics			West Ishi Pishi Analysis Area	Access Benefit			Resource Risk					
Route ID	**Length (miles)**	**Objective (Planned) ML**	**Description**	**Fire and Fuels**	**Recre-ation**	**Veg Mgmt**	**Water Quality & Fisheries**	**POC Root Disease**	**Active and Potential Instability**	**Invasive Plants**	**Wild -life**	**Recommendations**
13N13	14.2	3	Ridge to valley haul road in good condition except where it crosses landslide terrain. Road traverses a large rotational landslide located near Bark Shanty Gulch bridge.	H	M	H	H	L	H	M	L	Downgrade to Maintenance Level 2 and Stormproof.
13N13.1	0.12	UA	Short near ridge road. A loop that starts and ends at 13N13. It crosses two ephemeral swales above 13N13 ~ 200 Ft. from the exit point. These crossings have dirt fills with no drainage structure.	L	L	H	L	L	L	L	L	Restore
13N13.2	0.05	UA	Short road that provides access to dispersed camping at "Frog Pond". No major erosional features or CMPs present. Accessible with 2WD.	L	M	L	L	L	M	L	L	Add as Maintenance Level 2
13N13.3	0.92	UA	Route has numerous fillslope and cutbank failures and several cross drains that have failed due to plugging from debris slides. Walk-in access only.	L	L	L	H	L	H	L	L	Restore
13N13.4	0.57	UA	Route has several fillslope failures in close proximity to the Klamath River. This route is primarily insloped, allowing surface water to concentrate and discharge in several fillslope locations causing significant erosion. Some of the runoff causing erosion is contributed by the 13N13.3 upslope. Close proximity to the Klamath and in deteriorating condition. Walk-in access only.	L	L	L	H	L	M	L	L	Restore
13N13.5	0.08	UA	Short route with no CMPs or major erosional features.	L	M	M	L	L	L	L	L	Restore
13N13A	1.5	1	Midslope road on steep, highly erosive terrain and burned over in the 2008 fires. Several cross drains have failed due to debris slides above. There also is an undersized culvert with diversion potential. Some parts accessible with 2WD other parts walking access only.	H	L	H	H	L	H	L	L	Keep as Maintenance Level 1

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Route ID	**Length (miles)**	**Objective (Planned) ML**	**Description**	**Fire and Fuels**	**Recre-ation**	**Veg Mgmt**	**Water Quality & Fisheries**	**POC Root Disease**	**Active and Potential Instability**	**Invasive Plants**	**Wild -life**	**Recommendations**
13N14	5.06	3	Midslope road paralleling 13N18. Well-traveled road with solid surface. 3 culverts with diversion potential are undersized. (Note: public access ends at private property - gate and sign).	H	L	H	H	L	M	L	L	Downgrade to Maintenance Level 2 and Stormproof.
13N14.1	0.51	UA	Short route with no CMPs or major erosional features.	L	L	H	L	L	M	L	L	Restore
13N14A	1.2	1	Road has a solid surface and no serious erosion problems currently. Many culverts are partially blocked and 2 culverts with diversion potential are undersized. Accessible with 2WD.	H	L	H	H	L	L	L	L	Upgrade to Maintenance Level 2 and Stormproof.
13N14A.0	0.29	UA	Short route with no CMPs or major erosional features.	H	L	H	L	L	L	L	L	Add as Maintenance Level 2
13N14A.1	0.14	UA	Short route with no CMPs or major erosional features.	L	L	H	L	L	L	L	L	Restore
13N14B	0.5	1	Road heavily overgrown. No CMPs or major erosional features.	H	L	H	L	L	L	L	L	Keep as Maintenance Level 1
13N14C	0.2	1	Road overgrown. No CMPs or major erosional features.	M	L	H	L	L	L	L	L	Keep as Maintenance Level 1
13N14D	0.5	1	Abandoned midslope spur with solid, well-drained surface. No intersecting watercourses or others in close proximity. No sediment risk due to solid surface, moderate to heavy vegetation, and naturally deteriorating outboard road edge.	L	L	H	L	L	M	L	L	Keep as Maintenance Level 1
13N14Y	1.8	1	Midslope spur with several features in the 1st mile. 1 cross drain has failed and multiple culverts with diversion potential are undersized. Close proximity to the Klamath River and should be treated soon.	L	L	H	H	L	M	L	M	Decommission

Road Characteristics			West Ishi Pishi Analysis Area	Access Benefit			Resource Risk					
Route ID	**Length (miles)**	**Objective (Planned) ML**	**Description**	**Fire and Fuels**	**Recre-ation**	**Veg Mgmt**	**Water Quality & Fisheries**	**POC Root Disease**	**Active and Potential Instability**	**Invasive Plants**	**Wild -life**	**Recommendations**
13N14Y.0	0.59	UA	No major erosional features or CMPs present. Walking access only.	L	L	H	L	L	H	L	L	Restore
13N14Y.1	0.14	UA	Short spur with no features. 2 open crossings appear to have been pulled long ago. Walking access only.	L	L	H	L	L	M	L	L	Restore
13N14Y.2	0.22	UA	Short spur with no features. The surface is heavily vegetated. Walking access only.	L	L	H	L	L	M	L	M	Restore
13N14YA	0.7	1	2 plugged CMPs but no significant erosion occurring as a result.	L	L	H	M	L	M	L	L	Decommission
13N16	2.9	2	This is a 3.0 mile long midslope road and the first 0.1 miles are recommended to keep open. The remaining 2.9 miles has been recommended for decommissioning. This area was burned over in the 2008 fire. Vehicle access is blocked at 0.80 miles. There are also some small debris slides at mile post 2.40 and 2.83 blocking the road.	M	L	H	H	L	H	L	L	Decommission
13N16	0.1	2	First 0.1 miles are in good shape and proposed to keep open.	M	L	H	L	L	H	L	L	Keep as Maintenance Level 2
13N16.1	0.33	UA	Short near ridge road to landing. No major erosional features or CMPs present. Walk-in access only.	L	L	H	L	L	M	L	L	Add as Maintenance Level 2
13N16.2	0.37	UA	Short ridge to near ridge road. No major erosional features or CMPs present. Walk-in access only.	L	L	H	L	L	M	L	L	Restore
13N17	.4	2	Access to Flint Valley. Total road length is 2.8 miles. First .4 miles is recommended to keep open and maintain seasonal closure for entire road.	H	L	H	H	H	M	L	L	Keep as ML 2

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Route ID	**Length (miles)**	**Objective (Planned) ML**	**Description**	**Fire and Fuels**	**Recre-ation**	**Veg Mgmt**	**Water Quality & Fisheries**	**POC Root Disease**	**Active and Potential Instability**	**Invasive Plants**	**Wild -life**	**Recommendations**
13N17	2.4	2	This segment of 13N17 is recommended for decommissioning.	H	L	H	H	H	M	L	L	Decommission
13N17.1	0.55	UA	Short near ridge road to landing. Road is blocked 20 ft. from 13N17 by large dirt berm. No CMPs present. Partially burned by 2008 fire.	L	L	H	L	L	M	L	L	Restore
13N18.1	0.79	UA	Overgrown near ridge road. No CMPs or erosional features.	M	L	H	L	L	H	L	L	Restore
13N18.2	0.45	UA	Short near ridge road. No CMPs or major erosional features.	L	L	H	L	L		L	L	Restore
13N18.3	0.04	UA	Short route used primarily for dispersed camping at Ogaromtoc Lake (Frog Pond).	L	M	L	L	L	M	L	L	Add as maintenance Level 2
13N18.4	0.01	UA	Short route used primarily for dispersed camping at Ogaromtoc Lake (Frog Pond).	L							L	Add as maintenance Level 2
13N18A	0.4	1	Midslope road. Heavily vegetated. No major erosional features or CMPs present.	L	L	H	L	L	M	L	L	Keep as Maintenance Level 1
13N18B	0.4	1	Near-ridge spur road heavily vegetated with mixed drainage pattern. 3 crossings with perennial streams. CMPs all in good condition but unmaintained.	L	L	H	H	L	M	L	L	Decommission
13N18B.1	0.2	UA	Heavily vegetated short route. One crossing that appears to have been pulled several years ago. Walking access only.	L	L	L	L	L		L	L	Restore
13N18C	2	1	Midslope road with light vegetation to mile post 0.40, moderate to heavy vegetation beyond this point to end. Several unmaintained CMPs w/ partially blocked inlets and outlets.	M	L	H	H	L	M	L	L	Decommission
13N18C.1	0.08	UA	Short near ridge route.	L	L	M	L	L	M	L	L	Restore

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13N19	3.4	2	Midslope to ridge road ending at overlook. Drainage is mostly on roadway with some moderate rilling throughout and the crossings all in decent shape. Accessible with 4WD.	H	H	H	M	L	H	L	L	Keep as Maintenance Level 2 and Stormproof.
13N19.1	0.07	UA	Very short route to large landing. Landing lightly vegetated and stable. Walk-in access only.	L	L	H	L	L	L	L	L	Restore
13N19.2	0.64	UA	Near ridge route. Berm at mile post 0.01 restricts access. Many large water bars along road. Walk-in access only.	M	L	H	L	L	M	L	L	Restore
13N19.3	0.05	UA	Short ridge route to landing is vegetated and stable. Walk-in access only.	L	L	M	L	L	L	L	L	Restore
13N19A	0.1	1	Short midslope road to small landing which is lightly vegetated and stable. Walk-in access only.	L	L	H	L	L	M	L	L	Keep as Maintenance Level 1
13N20	3.65	1	Long near ridge road. The first approximate 2.50 miles to intersection with 13N20C are partially rocked with outsloped drainage to rolling dips and low spots. Roadbed is stable. This last mile is not in as good shape as the previous 2.50 miles. The roadbed is prone to rutting from vehicles when wet. Accessible with 4WD.	H	L	H	M	L	H	M	L	Upgrade to Maintenance Level 2 and Stormproof.
13N20.1	0.3	UA	Short near ridge route to landing with heavy vegetation. Road crosses an ephemeral stream with no drainage structure. No sign of overtopping or erosion. Walk-in access only.	L	L	H	L	L	M	M	L	Restore
13N20.2	0.12	UA	Short spur near end of 13N20 that ends at landing. No major erosional features or CMPs present. Walking access only.	L	L	H	L	L	H	M	L	Restore

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13N20A	0.2	1	Short near ridge road. Slight outsloped drainage working well with some minor fillslope gullies from concentrated water. One ephemeral crossing that looks good but unmaintained due to very heavy brush.	L	L	H	H	L	M	L	L	Keep as Maintenance Level 1
13N20C	1	1	Near ridge to ridge road. Road was cleared and improved for dozer line access in the 2008 fires. Drainage is outsloped. Roadbed is fairly stable with some rills and ruts. Accessible with 2WD.	M	L	H	L	L	M	M	L	Keep as Maintenance Level 1
13N21	1.2	1	Midslope road. This road is deteriorating with multiple failures throughout. Multiple crossings with diversion potential have undersized culverts. Debris slides at mile post 0.26 - 0.35 have removed sections of road. Walking access only.	M	L	H	H	L	H	L	L	Decommission
13N21.0	1.36	UA	No CMPs or major erosional features.	L	L	H	L	L	H	L	M	Restore
13N24	2.5	2	Midslope road. Drainage pattern is mixed and working well. 2 high priority stream crossings due to plugged inlets and buried outlets with diversion potential are undersized. Road needs maintenance or decommission. Walking access only.	L	L	H	H	L	H	L	H	Decommission
13N24.0	0.74	UA	No CMPs or major erosional features.	L	L	H	L	L	L	L	H	Restore
13N24.1	0.06	UA	Very short route to quarry site. Walking access only.	L	L	H	L	L	L	L	L	Restore
13N24.2	0.07	UA	Very short route to small landing. Walking access only.	L	L	H	L	L	L	L	H	Restore
13N24.3	0.08	UA	Very short spur road to landing. Road is bermed at beginning.		L	H	L	L	L	L	H	Restore
13N26	1.4	1	Total road length is 3.4 miles. This segment has been recently upgraded in the last 10 years.	H	L	H	H	L	M	L	H	Keep as Maintenance Level 1

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13N26	1.2	1	This 1.2 mile segment of 13N26 needs heavy maintenance or stormproofing.	H	L	H	H	L	M	L	H	Upgrade to Maintenance Level 2 and Stormproof.
13N26	0.8	1	This segment of 13N26 is recommended for decommissioning.	H	L	H	H	L	M	L	H	Decommission
13N26A	0.88	1	Near ridge to ridge road. Road is part of the upgraded road network for the area. It is now the natural extension of 13N26, connects with 13N26A.1 and back to 13N26 heading East (see map). The roadbed is compact and stable with little to no surface erosion. The road was burned over in 2008 and one CMP has been damaged.	H	L	H	H	L		L		Keep as Maintenance Level 1
13N26A.1	0.26	UA	Short near ridge route which is now part of the upgraded road network for the area. It is now the natural extension of 13N26, connecting 13N26A and 13N26 heading East. Like 13N26A, this road has been widened, rocked and new cross drains installed in the last 10 years.	L	L	H	H	L	M	L	L	Add as Maintenance Level 1
13N28	0.4	2	Short near ridge to ridge road. Roadbed is stable. Walking access only.	L	L	H	L	L	L	L	L	Downgrade to Maintenance Level 1
13N34	1.2	1	Open and drivable on 1st half; 2nd half vegetated and accessible by walking only. First 80' of this spur is becoming rutted due to surface flows with no discharge for another 100' down a 10% grade where it discharges onto fillslope.	M	M	H	M	L	M	L	L	Decommission
13N34.1	0.15	UA	No CMPs or major erosional features.	L	L	H	L	L	L	L	L	Restore

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13N34Y	0.4	1	Overgrown near ridge road paralleling 15N01. Drainage is mixed with insloped areas drained by waterbars. Besides the entrance, there are no cross drains. There is some gullying of the roadbed and outsloped fill at waterbars, but not significant.	L	L	H	L	L	M	L	L	Decommission
13N35	6.57	3	Long mid-slope to ridge road. Road drainage is mostly insloped with a prominent inboard ditch and frequent crossings. Road surface is mostly native, but some areas have been rocked and others have remnant chip seal. There are a few high priority treatment sites.	H	H	H	H	L	M	L	L	Downgrade to Maintenance Level 2 and Stormproof.
13N35.1	0.23	UA	Access road to spring. Road is stable. Stream crossing already pulled or washed out. Walk-in access only after first stream crossing.	L	L	H	L	L	L	L	L	Restore
13N35.2	0.08	UA	Very short ridge road to lookout/ landing. Some minor rilling on road and landing cutslope. Accessible with 4WD.	L	L	H	L	L	L	L	L	Restore
13N35.3	0.22	UA	Short near ridge road to landing which is vegetated and stable. Walk in access only after mile post 0.10.Skid road needs work and waterbars installed on 13N35.2.	L	L	H	L	L	M	L	L	Restore
13N35.4	0.53	UA	Short ridge road to overlook area.Walk-in access after mile post 0.13.	L	L	H	L	L	L	L	L	Restore
13N35.5	0.04	UA	Very short near ridge road to landing. Walk-in access after mile post 0.03.	L	L	H	L	L	M	L	L	Restore
13N35A	0.2	1	Short midslope spur road to landing. Accessible with 4WD.	L	L	H	L	L	L	L	L	Keep as Maintenance Level 1

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Route ID	**Length (miles)**	**Objective (Planned) ML**	**Description**	**Fire and Fuels**	**Recre-ation**	**Veg Mgmt**	**Water Quality & Fisheries**	**POC Root Disease**	**Active and Potential Instability**	**Invasive Plants**	**Wild -life**	**Recommendations**
13N35C	0.6	2	Short ridge road to landings. Drainage pattern mostly outsloped with waterbars but some drainage along road surface. Accessible with 4WD.	L	L	H	L	L	M	L	L	Keep as Maintenance Level 2
13N37	2.8	1	Long near ridge road serving as an artery to spur roads. Slight outslope drainage leading to rolling dips working well. 4 culverts with diversion potential are undersized. Some long tire rut gullies are found between the B and C spurs.	H	L	H	H	L	M	H	L	Upgrade to Maintenance Level 2 and Stormproof
13N37.1	0.1	UA	Short near ridge to ridge route. Walking access only.	L	L	H	L	L	L	L	L	Restore
13N37.2	0.35	UA	Ridge to near ridge road to landing. Crosses ephemeral stream with no visible drainage feature but there is no serious gullying. Walking access only.	L	L	H	M	L	L	L	L	Restore
13N37.3	0.04	UA	Short ridge road to landing and start of dozer line. Dozer line was built for 2008 fires and is blocked by large logs and tank traps. Landing is stable and no signs of erosion.	L	L	?	L	L	M	L	L	Restore
13N37.4	0.35	UA	Route runs between the 14N21 and 13N37. From the 13N37 the road is blocked by a tank trap and then outsloped for about 70 ft. Dozer line at end has been decommissioned.	L	L	?	M	L	H	L	L	Restore
13N37A	0.25	1	Short near ridge to ridge road. Road is blocked by berm at entrance. First 0.10 miles of road have been improved with slight outslope drainage to waterbar and rolling dip.	L	L	H	M	L	M	L	L	Keep as Maintenance Level 1
13N37B	0.35	1	Short near ridge road to landing. Slight outslope drainage with rolling dips working well. Accessible with 2WD.	L	L	H	L	L	L	L	L	Keep as Maintenance Level 1

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Route ID	**Length (miles)**	**Objective (Planned) ML**	**Description**	**Fire and Fuels**	**Recre-ation**	**Veg Mgmt**	**Water Quality & Fisheries**	**POC Root Disease**	**Active and Potential Instability**	**Invasive Plants**	**Wild -life**	**Recommendations**
13N37B.1	0.07	UA	Short near ridge to ridge route. Access blocked by tank trap. Slight outsloped drainage with water bars working well.	L	L	H	L	L	L	L	L	Restore
13N37C	0.3	1	Short near ridge to ridge road. Outsloped drainage to rolling dip working well. Road connects to 2008 line connecting to 13N16. Accessible with 2WD.	L	L	H	L	L	L	L	L	Keep as Maintenance Level 1
13N39	1	1	Total road length is 1.36 miles. This midslope spur road is rocked and outsloped with several rolling dips.	M	L	H	H	L	M	L	L	Keep as Maintenance Level 1
13N39	0.36	1	This segment has failed cross drains and an undersized culvert with diversion potential. Special Use Permit.	M	L	H	H	L	M	L	L	Decommission
13N39.0	0.31	UA	Short near-ridge road mapped from aerial photo.	L	L	H	L	L	M	L	L	Restore
13N41	0.1	2	Short (250') road off 13N13A.	L	L	L	L	L	L		L	Downgrade to Maintenance Level 1
13N47	1.9	2	Ridge road to small landing roadway. Culverts and the cross drain are unmaintained due to walking access only.	H	L	H	H	L	M	L	L	Keep as Maintenance Level 2 and Stormproof.
13N47.1	0.07	UA	Very short spur route ending at hillslope. No real drainage pattern. Walking access only.	L	L	L	L	L	M	L	L	Restore
13N47.2	0.07	UA	Very short spur road ending at hillslope. Walking access only.	L	L	H	L	L	L	L	L	Restore
13N47.3	0.1	UA	Very short spur road ending at hillslope. Walking access only.	L	L	H	L	L	L	L	L	Restore
13N47.4	0.05	UA	Very short ridge road to small landing. Walking access only.	L	L	H	L	L	L	L	L	Restore
13N48	4.5	2	Near ridge road. There are 7 undersized culverts with diversion potential and 3 major erosional features (mile posts 2.74, 3.83, 3.90).	H	L	H	H	L	H	L	L	Keep as Maintenance Level 2 and Stormproof.

Road Characteristics			West Ishi Pishi Analysis Area	Access Benefit			Resource Risk					
Route ID	**Length (miles)**	**Objective (Planned) ML**	**Description**	**Fire and Fuels**	**Recre-ation**	**Veg Mgmt**	**Water Quality & Fisheries**	**POC Root Disease**	**Active and Potential Instability**	**Invasive Plants**	**Wild -life**	**Recommendations**
13N48.0	0.19	UA	No CMPs or major erosional features.	H	L	H	L	L	L	L	L	Restore
13N48.2	0.35	UA	Short ridge road to landing. Accessible with 4WD.	M	L	H	L	L	L	L	L	Restore
13N50	0.1	2	Total road mileage is 1.1 miles. Keep open first 0.1 miles.	L	L	H	H	H	H	L	L	Keep as ML 2 and Stormproof.
13N50	1	2	Remaining road segment of 13N50 to be decommissioned. 3 culverts with diversion potential are undersized. Mile post 0.00 - 0.85 are in the fire area.	L	L	H	H	H	H	L	L	Decommission
13N50.1	0.31	UA	Short unauthorized route. Road is blocked by earthen berm and recontoured for about 100 ft. The road crosses one ephemeral stream with no culvert. The road ends at an intermittent stream.	L	L	M	L	H	M	L	L	Restore
13N51	3.8	1	Long near ridge road beginning. Road is fairly stable and vegetation moderate. Past 13N51B, road flattens out and is outsloped. Roadbed is stable and vegetation heavy.	H	L	H	M	L	M	M	L	Upgrade to Maintenance Level 2 and Stormproof.
13N51A	0.6	1	Short midslope road connecting 15N01 to 13N51. Outsloping road and upgrading drainage points are a priority.	L	L	H	L	L		L	L	Upgrade to Maintenance Level 2
13N51B	0.4	1	Short near ridge road. No CMPs or major erosional features.	L	L	H	L	L	M	L	L	Keep as ML 1
13N51C	0.5	1	Near ridge to ridge road. Heavily vegetated near the end.	H	L	H	L	L	M	L	L	Keep as Maintenance Level 1
13N51D	0.9	1	Heavily vegetated near ridge road.	L	L	M	H	L	M	L	L	Decommission
13N53	0.5	2	Short midslope road to small landing. Crossings all in good shape but unmaintained due to walking access only.	L	L	H	H	L	M	L	L	Decommission

Road Characteristics			West Ishi Pishi Analysis Area	Access Benefit			Resource Risk					
Route ID	**Length (miles)**	**Objective (Planned) ML**	**Description**	**Fire and Fuels**	**Recre-ation**	**Veg Mgmt**	**Water Quality & Fisheries**	**POC Root Disease**	**Active and Potential Instability**	**Invasive Plants**	**Wild -life**	**Recommendations**
13N54	1.7	2	Ridge road to landing. W alk in access from MP 0.30.	H	L	H	L	L	M	L	L	Keep as Maintenance Level 2
13N54.1	0.2	UA	No CMPs or major erosional features.	L	L	H	L	L	L	L	L	Restore
13N54A	0.7	1	Short ridge road that ends at hillslope.	L	L	H	L	L	M	L	L	Keep as Maintenance Level 1
13N54B	1.2	1	Ridge road to large landing. Drainage is mixed (inslope/outslope) with rolling dips. Walking access only.	H	L	H	H	L	H	L	L	Keep as Maintenance Level 1
14N17	4.35	2	Long midslope to near ridge road. Built in unstable geology. Failed crossing 14N17-1.0.	H	L	H	H	H	M	L	L	Decommission
14N17.1	0.18	UA	Short spur road to landing. Entrance blocked by double tank trap with log.	L	L	H	L	L	M	L	L	Restore
14N17.2	0.06	UA	Short ridge road to landing.	L	L	H	L	L	M	L	L	Restore
14N21	2.2	3	This segment of 14N21 (from the junction of 13N35 to Highway 96) traverses several large landslides and is no longer accessible by motor vehicles.	H	H	H	H	H	H	H	H	Decommission
14N21	12.8	3	This segment of 14N21 is a primary access road in good condition except where crossing large landslides. There are numerous culverts with diversion potential that are undersized.	H	H	H	H	H	H	H	H	Keep as Maintenance Level 3 and Stormproof.
14N21.0	0.26	UA	There is a pulled stream crossing at the end of road. Waterbars are spaced at regular intervals. No features present.	L	L	M	L	H		L	L	Restore
14N21.1	0.18	UA	Short connector road to 13N37. Bermed on both ends. Waterbars placed frequently. Roadbed is stable with little to no risk of sediment delivery to the stream network.	L	L	M	L	L	L	L	L	Restore

Road Characteristics			West Ishi Pishi Analysis Area	Access Benefit			Resource Risk					
Route ID	**Length (miles)**	**Objective (Planned) ML**	**Description**	**Fire and Fuels**	**Recre-ation**	**Veg Mgmt**	**Water Quality & Fisheries**	**POC Root Disease**	**Active and Potential Instability**	**Invasive Plants**	**Wild -life**	**Recommendations**
14N21.2	0.06	UA	Very short spur road to small landing. Roadbed is stable.	L	L	M	L	L	L	L	L	Restore
14N21.3	0.2	UA	Very short spur road to small landing. Drainage pattern is outsloped with water bars present. Roadbed is stable.	L	L	M	L	L	L	L	L	Restore
14N21.4	0.08	UA	Very short spur road to large landing/ quarry. Road is bermed at start. \Roadbed is stable.	L	L	H	L	L	M	L	L	Restore
14N21.5	0.09	UA	Very short spur road to small landing. Some waterbars. Road and landings are stable.	L	L	M	L	L	L	L	L	Restore
14N21.6	0.16	UA	Gullies on roadbed. Walking access only. 1 crossing has failed.	L	L	L	H	L	M	L	L	Restore
14N21.7	0.36	UA	Segments of road have been washed out. Walking access only.	L	L	L	H	L	H	L	L	Restore
14N21.8	0.12	UA	Two washed out crossings and upslope runoff that is eroding sections of the road. Walking access only.	L	L	L	H	L	M	L	L	Restore
14N21.9	0.04	UA	Short route with minor fillslope erosion due to road surface runoff. Walking access only.	L	L	L	H	L	M	L	L	Restore
14N21.10	0.43	UA	Short near ridge route.	M	L	M	L	L	L	L	L	Restore
14N21B	0.65	1	Short road. No features.	H	L	H	L	H	L	L	L	Keep as Maintenance Level 1
14N21D	0.8	2	Short near ridge road to series of landings. Drainage pattern is outsloped with rolling dips.	M	L	H	L	L	L	L	L	Keep as Maintenance Level 2
14N21E	1.1	1	Midslope road appears to have been decommissioned. Roadbed is heavily vegetated throughout.	L	L	M	H	L	H	L	L	Decommission

Road Characteristics			West Ishi Pishi Analysis Area	Access Benefit			Resource Risk					
Route ID	**Length (miles)**	**Objective (Planned) ML**	**Description**	**Fire and Fuels**	**Recre-ation**	**Veg Mgmt**	**Water Quality & Fisheries**	**POC Root Disease**	**Active and Potential Instability**	**Invasive Plants**	**Wild -life**	**Recommendations**
14N31	1.3	2	Total road length of 14N31 is 4.55 miles. This segment of the Siskon Mine Road of begins at the intersection with 14N21 and continues for about 1.3 miles. This segment is recommended for keeping on the road system as a maintenance level 2 road.	L	L	H	H	H	H	H	L	Keep as ML 2
14N31	3.2	2	This segment of the Siskon Mine road crosses unstable geology resulting in debris slides, fillslope failures, and rock debris on road. 2008 fire burned sections of road starting at mile post 1.80.	L	L	H	H	H	H	H	L	Decommission
14N31.1	1.14	UA	Old route down to Copper Creek. Road has been partially decommissioned The route burned over in 2008.	L	L	M	L	H	H	L	L	Restore
14N31.2	1.38	UA	Valley to ridge route begins at Copper Creek and ending at private property boundary and the Siskon Mine entrance. This route was partially decommissioned and may need additional treatments for water quality protection.	L	L	L	H	L	H	L		Restore
14N31.2A	1.96	UA	Midslope route that accesses private land and Siskon Mine area.	L		L	L	L	H	L	L	Restore
14N31A	1	1	Midslope road with drainage problems in need of maintenance.	L	L	H	H	H	H	L	L	Decommission
14N69.1	0.25	UA	Short unauthorized route.	L	L	H	L	L	M	L	L	Restore
15N01.1	0.47	UA	Short near-ridge road. Road tank trap at mile post 0.15.	M	L	H	L	L	L	L	L	Restore
15N01.2	0.07	UA	Very short near-ridge road. Road decommissioned at end.	L	L	H	L	L	L	M	L	Add as Motorized Trail

Road Characteristics			West Ishi Pishi Analysis Area	Access Benefit			Resource Risk					
Route ID	**Length (miles)**	**Objective (Planned) ML**	**Description**	**Fire and Fuels**	**Recre-ation**	**Veg Mgmt**	**Water Quality & Fisheries**	**POC Root Disease**	**Active and Potential Instability**	**Invasive Plants**	**Wild -life**	**Recommendations**
15N01.3	0.12	UA	Very short ridge road to radio tower/ landing.	L	L	H	L	L	L	L	L	Add as Motorized Trail
15N01.3A	0.01	UA	Very short ridge road to radio tower/ landing.	L	L	H	L	L	L	L	L	Add as Motorized Trail

Appendix E – Economic Analysis

Road Maintenance – Purpose and Objectives

The Forest is authorized to acquire, construct, and maintain roads to permit the maximum economy in meeting requirements for management of the National Forest. Financing of these roads is accomplished primarily through expenditure of appropriated funds but with some additional funding from contractual requirements imposed on timber sale purchasers.

The objective is to operate and maintain each road in a manner that meets the road management objective (RMO) and provide for:

- Safe and efficient travel
- Access for the administration, utilization, and protection of public land
- Protect the environment, adjacent resources, and public investment
- Stewardship of the capital investment in the road

The frequency and type of maintenance work accomplished is subject to the availability of funding.

Road Maintenance Levels

Maintenance levels are defined by the Forest Service Handbook (FSH) 7709.59, Chapter 60 Section 62 as the level of service provided by, and maintenance required for, a specific road. Maintenance levels must be consistent with RMO and maintenance criteria. The maintenance level is determined by considering the purpose and need for the road, forest plan objectives, funding, and many other factors. A road may be constructed to serve at a maintenance level which fulfills an immediate need (operational maintenance level), but planned to be modified and converted to another maintenance level to fulfill a future need (objective maintenance level). This analysis will provide recommendations to the *objective* maintenance level.

There are five maintenance levels classified in the FSH. Levels 3, 4, and 5 are subject to the Federal Highway Safety Act and standards in the Manual of Uniform Traffic Control Devices. The levels are described as follows:

Maintenance Level 5 – A road that provide a high degree of user comfort and convenience. These roads are normally double-lane, paved facilities; some may be aggregate surfaced with dust abatement. These roads have the following characteristics:

- Highest traffic volume and speeds.
- Typically connect to State and county roads.
- Usually arterial and collector roads.
- Drainage addressed by use of culverts.

There are no level 5 roads in the West Ishi Pishi analysis area.

Maintenance Level 4 – A road that provides a moderate degree of user comfort and convenience at moderate speeds. Most are double lane and aggregate surfaced with the following characteristics:

- Moderate traffic volume and speeds.
- May connect to county roads.
- Usually a collector road.
- Drainage addressed by use of culverts.

Maintenance Level 3 – Roads that is open and maintained for travel by prudent drivers in a standard passenger car. User comfort and convenience are low priorities. These roads are typically low speed and single lane with turnouts. They have the following characteristics:

- Low traffic volume and speed.
- Typically local roads.
- Typically connect to arterial and collector roads or are collector roads.
- Combination of culverts and grade dips provide drainage.
- Potholing or washboarding may occur.

Maintenance Level 2 – Roads that are open for use by high-clearance vehicles. Passenger car traffic is not a consideration. Traffic is normally minor, consisting of one or a combination of administrative, permitted, dispersed recreation or other specialized uses. The roads have the following characteristics:

- Low traffic volume and speed.
- Typically local roads.
- Typically connect collector and other local roads.
- Combination of culverts and grade dips provide drainage.
- Surface smoothness is not a consideration.
- Not subject to Highway Safety Act or Manual of Uniform Traffic Control Devices.

Maintenance Level 1 – A road that is closed to vehicular traffic intermittently for periods exceeding one year. Basic custodial maintenance is performed to protect adjacent resources and enable the road to facilitate future management activities. Planned road deterioration may occur at hikers, equestrians, bicyclists, and such. Roads in this category may be of any class or construction standard and may be managed at any other maintenance level during the time they are open for traffic. The have the following characteristics:

- Vehicular traffic is eliminated including administrative traffic.
- Entrance is physically blocked or otherwise disguised.
- No maintenance other than a condition survey may be required as long as no potential for resource damage exists.
- Not subject to Highway Safety Act or Manual of Uniform Traffic Control Devices when closed.

Road Maintenance Frequency

Roads generally are constructed with the intention of minimizing the need for heavy maintenance. The goal is to increase the time between surface disturbance to 5 to 10 years or longer. Less surface disturbance allows establishment of vegetation to reduce erosion and sediment transport as well as reduce spread of invasive plant species.

Road Maintenance Costs

Federally appropriated funds allocated for road maintenance throughout the Ukonom Ranger District has ranged from $2,500 to $1.3 million. The high end of funding noted here includes additional funding received from Federal Highways for storm damage repair as is not to be considered a steady source of funding. In the past eight years, approximately $20,000 has been spent on road maintenance in the West Ishi Pishi area. Road maintenance funding is expected to continue to decline in the future.

Besides the physical performance of maintenance related work, all road systems have fixed costs associated with management of the system. Management includes:

- Oversight of the road system and decision making
- Establishing and maintaining road management systems required by law (e.g., pavement management, bridge management, safety management, and congestion management)
- Collecting and maintaining data about the road system (e.g., conducting road condition surveys, gathering traffic count and vehicle accident information)
- Providing information services (e.g., maps, road condition reporting)
- Future year project planning (e.g., specialist surveys, engineering, reports)
- Office support (e.g., contracting officers, utilities, computer system)

Road condition surveys are conducted on 20 percent of the road system annually to determine the maintenance and associated funding needed to maintain roads to the required safety standards and assigned maintenance levels. These surveys describe the features of the roads (e.g., surfacing, ditches, drainage dips, and culverts) and their conditions. The maintenance costs of those roads and features are calculated from the surveys using a standard cost guide. Those surveys indicate that the annual road maintenance funding necessary for system roads in the West Ishi Pishi area is approximately $198,210. Table 1 lists the average annual road maintenance cost per year. The current and foreseeable future road maintenance budget is not adequate to fully support all of the road maintenance needs in the analysis area.

Table 1 – Existing road maintenance costs by road maintenance level

Maintenance Level	Annual Cost per Mile	Existing Miles	Annual Cost
4	$9,078	3	$27,234
3	$2,355	55	$129,525
2	$593	60	$35,580
1	$103	57	$5,871
Totals:		**200**	**$198,210**

Cost Reduction Strategies

The following includes some possibilities to align needed roads with the current and predicted road maintenance budget.

- Decrease maintenance levels on roads.
- Decommission roads.
- Convert open or closed roads to motorized trails.

Decrease Maintenance Levels

Maintenance levels (ML) are determined by considering the following factors: resource program needs, environmental and resource protection requirements, user safety, composition of traffic (volume, type, class), surface type, and user comfort and convenience. The higher the maintenance level the higher the user comfort level and required cost for upkeep.

Decommissioning Roads

This cost reduction method would also eliminate the total number of miles in the analysis area and therefore the annual maintenance costs required.

The cost associated with decommissioning varies greatly and is dependent on the extent of earth work needed. The majority of roads would require fairly extensive earth work to effectively decommission them. Some roads would require little more than placing a vehicle barrier at the entrance. Decommissioning costs average $15 per cubic yard of material moved.

Convert Open or Closed Roads to Motorized Trails

This option would allow for unauthorized routes to be added to the motorized trail system at a reduced cost. Converting roads to trails, maintains access to the Forest while reducing the maintenance costs.

Conclusion

It is clear that creating a road system to match our funding by simply closing roads will not result in a functional minimum road system for the public or the Forest. Table 2 shows the recommended minimum road system (not including the Eyesee Road (15N01).

Table 2 shows the recommendations for maintenance levels in the West Ishi Pishi area.

Table 2 – Reduction of System Road Miles

Maintenance Level	Annual Cost per Mile	Proposed Miles	Annual Cost
4	$9,078	3	$27,234
3	$2,355	19.5	$45,923
2	$593	53	$31,429
1	$103	47	$4,841
Totals:		**145**	**$109,427**

Appendix F – Recommendations Map

The minimum road system in this map is the Analysis Team's recommendation only. During subsequent NEPA processes, roads may be added or deleted from the existing road system in order for the Forest to achieve the minimum road system. See Key Findings on page 20.