

Step 6 - Recommendations

INTRODUCTION

This step synthesizes results of the ecosystem processes discussed in previous steps and generates management recommendations responsive to issues and key questions. The goal of the recommendations is to identify changes in ecosystem conditions and functions that require management action to achieve desired ecologic, economic, and social objectives.

Management recommendations are broken into eight issue areas; **Hillslope Processes, Riparian Areas, Aquatic Dependent Species, Fire, Late Successional Habitat, Terrestrial Wildlife, Roads, and Human Uses**. Recommendations are developed based on analyses and conclusions reached in previous steps. Recommendations are displayed in narrative format in **Tables 6-1 through 6-8** on the following pages.

Recommendations focus on Management Opportunities which are also contained in the tables in narrative format and visually displayed in **Figures 6-1 through 6-8**, contained in the Map Packet located at the end of this document. Narratives are to be used in conjunction with these maps to arrive at opportunity locations.

Tables in this step provide general descriptions of the Existing Situation, Desired Conditions, Management Opportunity, Benefitting Resources, and Considerations, and Emphasis Rating. **Red Flag** opportunities which should be given the highest priority, are identified in the Management Opportunity column.

TABLE COLUMN DEFINITIONS

Existing Situation & Desired Condition

These narratives are qualitative and quantitative determinations identified through the analysis process. Existing Situation summary statements are generated directly from integrating information on management practices and/or ecological processes from **Steps 3, 4, and 5**; most are situations not meeting Desired Conditions.

Desired Conditions are developed from **Step 5** - Interpretation and represent a refinement of direction from the *Forest Plan*.

Management Opportunity

This is the identification of management actions, projects, and other activities that promote Desired Conditions. During the analysis process, comparisons were made between Existing Situation and Desired Condition to determine how close a particular resource or ecological function was to achieving the Desired Condition. Opportunities were developed that either maintained the Desired Condition, or improved ecosystem trends to move towards Desired Condition.

Benefitting Resources

This identifies a priority list of multiple resources that most benefit from the completion of the listed opportunity.

Considerations

Factors identified in this column should be taken into account when implementing Management Opportunities. They may include Karuk perspectives, risks or benefits to other resources, or options and alternatives to consider when accomplishing the Management Opportunity. Comments found under Considerations should be reviewed during development and implementation of site-specific projects.

Emphasis Rating

To assist with establishing work priorities for project development, an emphasis rating system is used. The following questions are considered for rating individual opportunities.

- 1- Are there resources at-risk if the opportunity does not occur?
- 2- Is the opportunity an immediate need?
- 3- Are there amenity or commodity benefits from doing the opportunity?
- 4- Does the opportunity have implications outside the watershed?

5- What is the value of the completed opportunity as opposed to the cost of implementation?

Each Analysis Team member assigns a High, Medium, or Low value to the five questions listed above, based on their professional judgement. These responses are averaged to establish one rating for each question. The values of all five questions are then averaged to establish the Final Emphasis Rating. Averaged ratings for each question and the Final Emphasis Ratings are shown on **Table 6-9**.

When an across the board rating of High is given, it is referred to as a **Red Flag** opportunity. It implies a sense of urgency for implementation to bring an ecosystem function or system back in balance or respond to human needs or values. **Red Flag** opportunities should be given the highest priority.

Interested community members also assigned priority to management opportunities. At an open house, each person was given five dot stickers to place next to the five opportunities they felt were most important. A selected opportunity meant the public felt an emphasis or priority should to be placed on a general topic. It did not necessarily mean a priority should by

placed on implementing the specifics of the topic or management opportunity. For example, roads opportunity number 29 received 11 dots. The emphasis placed by the public on this opportunity meant that roads and the Forest Service road system are very important topics. It did not mean the public felt that implementing the opportunity (utilizing the specific recommendations made in the Access and Travel Analysis) was necessarily a priority. Public priorities are displayed in **Table 6-10**, which summarizes the number of dot stickers an opportunity received.

Both methods of prioritizing opportunities provide valuable information to forest managers. Both will be used by the Happy Camp Ranger District when developing and implementing activities at the project level.

It is important to note that all identified opportunities are general in nature. Specific "how tos" will be determined later, during project development and implementation at the District level, through a project environmental analysis.

Table 6-1 ISSUE - Hillslope Processes				
EXISTING SITUATION	DESIRED CONDITION	MANAGEMENT OPPORTUNITY	Benefitting Resources	Considerations
1- Eight subwatersheds have been identified as impaired (Caroline, China Horse/Cade, Mill/Slide, Rancheria, Walker, West Grider/Bittenbender, and Upper Seiad); high road density is the primary contributor.	1- Management activities in impaired subwatersheds are neutral to or contribute to recovery. These watersheds recover so they are no longer considered impaired.	1- Use Appendix E - Access and Travel Analysis, to repair or decommission roads contributing to the impairment of subwatersheds following a site specific analysis; see Figure 6-1 .	1- Hillslope Processes, Aquatic Species	1- None identified at this time.
2- Much of the analysis area has high road densities (>4 miles/sq. mile); many of these roads are not consistent with current land allocations. There are also sediment concerns especially associated with unstable lands.	2- Resource impacts from roads are minimized while maintaining a road system adequate to manage National Forest lands.	2-a. Use Appendix E to improve, or decommission roads to reduce aquatic resource impacts and meet land allocation goals; see Figure 6-1 . 2-b. Design and implement roads projects (both reconstruction and new construction) to ensure the best soil compaction possible is achieved. Avoid unstable lands whenever possible.	2- Hillslope Processes, Aquatic Species, Terrestrial Wildlife, Transportation Management	2- Geotechnical input is used for any reconstruction or new construction.
3- Some subwatersheds are nearing impairment threshold; O'Neil/Schutts, Panther, Seattle/Joe Miles.	3- The watersheds are resilient to natural disturbance and management activities. Within the analysis area, none of the watersheds are impaired or approaching impairment threshold.	3-a. Design and location of future management activities improve or maintain subwatershed conditions. Examples: avoid unstable lands, avoid constructing new roads, use prescribed fire and vegetation management to reduce fuel loadings. 3-b. Monitor conditions of subwatersheds. Use <i>Road Sediment Source Inventory and Risk Assessment</i> to identify high risk road areas. Conduct survey for low density road fills. Use <i>Watershed Improvement Needs Inventory</i> to identify threats to watershed health. Prioritize restoration based on an analysis of ecologic and economic cost effectiveness.	3- Hillslope Processes, Aquatic Species, Terrestrial Wildlife	3- None identified at this time.

Table 6-2 ISSUE Riparian Areas				
EXISTING SITUATION	DESIRED CONDITION	MANAGEMENT OPPORTUNITY	Benefitting Resources	Considerations
4- High amounts of instream fine sediments are reducing habitat quality for many aquatic species. Streams most highly affected are Grider, Walker, Thompson, Seiad.	4- Habitat is sufficient for sustainable populations of indigenous aquatic species. Fine sediment input, accumulation, and transportation are reduced to reference levels.	4- Restore natural stream processes allowing streams to become resilient to disturbance; decrease amounts of fine sediment entering stream systems, especially from road systems in upper watersheds. Use Appendix E to identify roads opportunities; see Figure 6-1 .	4- Aquatic Species	4- None identified at this time.
5- As a result of this analysis Riparian Reserves are mapped at the watershed scale. Further Riparian Reserve delineation is needed at the project scale.	5- Delineation of Riparian Reserves continues through project level planning.	5- Further refine delineation of Riparian Reserves at the project level to a) facilitate project planning while meeting Riparian Reserve objectives, b) ensure location of Riparian Reserves in relation to project locations, c) validate both watershed level and <i>Forest Plan</i> level Riparian Reserve mapping. Priorities for project level Riparian Reserve delineation should be placed in areas where management activities are planned.	5- Hillslope Processes, Aquatic Species, Terrestrial Wildlife	5- None identified at this time.
6- Low levels of instream Large Woody Material and recruitment exist in some streams, especially in Walker, Seiad, and Thompson Creeks. Trees and woody material are removed from Riparian Reserves by firewood cutting.	6- Public is aware of the importance of large trees and wood in Riparian Reserves and removal of these items is minimized.	6- Improve site conditions to promote growth of large trees and increase large wood recruitment in capable Riparian Reserves. Discourage removal of trees and woody material from stream channels and Riparian Reserves through better public communication, posting of signs, and through enforcement of existing laws. Identify areas outside of Riparian Reserves that would be good firewood gathering areas (see Management Opportunity 36).	6- Aquatic Species	6- None identified at this time.

Table 6-3 ISSUE Aquatic Dependent Species				
EXISTING SITUATION	DESIRED CONDITION	MANAGEMENT OPPORTUNITY	Benefitting Resources	Considerations
7- Tributaries within analysis area provide important cold, high quality water to the Klamath River.	7- Aquatic Dependent Species management activities maintain or improve cold water contribution to Klamath. Tributaries continue to provide cold, high quality water.	7- Design and placement of future management activities does not contribute to water quality degradation, including water temperature. Identify and monitor crucial cold water streams.	7- Aquatic Species	7- None identified at this time.
8- Populations of coho and steelhead are largely unassessed within analysis area. Important habitat (spawning/rearing) areas are unknown.	8- Aquatic populations within analysis area are maintained; current fish range resembles historic range.	8- Gather population information and complete spawning surveys on smaller streams. Design and placement of future management activities do not impact these species.	8- Aquatic Species	8- None identified at this time.

Table 6-4 ISSUE Fire				
EXISTING SITUATION	DESIRED CONDITION	MANAGEMENT OPPORTUNITY	Benefitting Resources	Considerations
9- The fires of 1987 burned 62,000 acres of the analysis area, 54,000 acres burned with low to moderate severity. Due to the long duration of these fires and that most of these acres were burned under a temperature inversion, the effects were less severe than would have been expected, given the amount of available fuels. Areas that burned with low to moderate severity currently present an opportunity to apply underburning to establish conditions that existed with the influence of frequent fire disturbance.	9- Restoration of fire adapted vegetation and ecosystems that were historically maintained within the analysis area.	9- Treat (underburn) areas that burned in the fires of 1987 to restore conditions that were present prior to fire suppression activities; see Figure 6-2 .	9- Wildlife, Aquatics, Human, Fire	9- None identified at this time.
10- As a result of fire salvage and timber harvest there are approximately 22,000 acres of plantations in the analysis area. These investments are very susceptible to fire.	10- Protection of plantations growing on good sites from catastrophic fire. Plantations are managed to promote tree growth and develop conditions that are resilient to fire disturbance. Plantations provide future mid/late-seral habitat and also timber for future harvest opportunities.	10- Use innovative methods to thin plantations and remove fuels to develop conditions that are resilient to fire in matrix plantations. (For treatment opportunities of plantations in Late Successional Reserves see Management Opportunity 15. For treatment opportunities of plantations in Riparian Reserves see Management Opportunity 16b.) Examples; 10-a. Establish fuelwood cutting and pole cutting areas within older plantations to thin these stands. 10-b. Use Klamath NF owned yarder to remove thinned trees from plantations. 10-c. Provide thinnings to fuelwood cutters or sell for chips. 10-d. Underburn, pile jackpot areas and burn, to remove fuels and establish fire resilient conditions; see Figure 6-2 .	10- Wildlife, Aquatics, Human, Fire	10- None identified at this time.
11- Roads within the analysis area are in need of repair and maintenance in order to provide access and control points for fire suppression and fuels treatment activities. Existing roads that are needed for fire and fuels have been identified in the <i>Access and Travel Analysis</i> (ATA).	11- A road system that provides good access and control points for fire suppression and fuels treatment. A system of shaded fuelbreaks are established and maintained to ensure fire is able to play its natural role in the analysis area.	11- Use ATA (Appendix E) to improve access for fire suppression and strategic use of roads for prescribed fire and suppression efforts. 11a- Develop a system of shaded fuelbreaks that incorporates the ATA; see Figure 6-2 .	11- Wildlife, Aquatics, Human, Fire	11- None identified at this time.
12- Much of the area in and around residences is identified as having moderate to high fire behavior potential. Many residents are currently unaware that they are living in areas that are susceptible to high severity wildfire and are unprepared.	12- Residents within the analysis area are safe from wildfire.	12- Fire Prevention personnel utilize available resources and work closely with local volunteer fire departments and residents to develop defensible spaces and fire safe conditions in and around residential areas.	12- Human, Fire	12- None identified at this time.
13- Vegetated areas that have not been disturbed in recent years have become fire intolerant. Species dependant on disturbance are losing their ability to persist in the analysis area. A lack of fire disturbance has contributed to a loss of forest openings and spacial diversity. Species diversity is being lost with fire intolerant species dominating much of the area.	13- Disturbance adapted mixed conifer communities are maintained/increased. Fire plays a natural role in the development and maintenance of late-mature/old-growth stands, meadows, serpentine balds, oak woodlands and montane chaparral.	13- Establish a fire and fuels program that progresses towards a more frequent, low-intensity fire regime similar to what occurred historically; utilize Figure 6-3 .	13- Wildlife, Aquatics, Human, Fire	13- None identified at this time.

Table 6-5 ISSUE Late-Successional Habitat

EXISTING SITUATION	DESIRED CONDITION	MANAGEMENT OPPORTUNITY	Benefitting Resources	Considerations
14- Effective fire suppression has changed the distribution and structure of late-successional forest. Lack of fire has resulted in increased stand densities, fuels build-up, development of ladder fuels, development of closed canopies that can sustain crown fire, and an understory which has filled in with shade-tolerant conifer and hardwood reproduction. Change in stand structure has been most evident on south and west aspects and higher on slopes where historically stands were more open. These conditions contribute to the susceptibility of the area to catastrophic loss from wildfire or pest epidemic.	14- Late-successional forest conditions are promoted and sustained in LSRs, RRs and other special habitat areas. Forests are structurally diverse. North and east slopes have dense stands of late-successional habitat, especially low on slopes, with an abundance of snags and large downed logs. South and west facing slopes are more open grown with hardwoods in the understory. The upper third of south and west slopes may be quite open in areas. Snags and large logs are more variable on south and west slopes.	14-a. In late-successional forest stands, reduce stand densities, ground fuels and ladder fuels where they contribute to risk of large-scale disturbance events in reserves. Use prescribed fire to reduce fuels, use or mechanical treatments prior to burning where fuel loadings are extreme. Manage for more dense stands on N&E aspects and in draws, manage for open grown stands on S&W aspects and higher on slopes. 14-b. Protect mid and early seral vegetation in LSRs from loss to large-scale disturbance events. Use prescribed fire in mid- and early successional pole size stands to reduce fuels. Use hand piling or mechanical treatment of fuels in areas where prescribed fire is not recommended or in areas that need pre-treatment. 14-c. Promote development of late-successional habitat (in early and mid-seral stands) that is at a lower risk for large-scale disturbance. Use mechanical or manual thinning to reduce stand densities and fuels; use prescribed fire to reduce activity fuels; regenerate and reforest in dense, stagnated younger stands; see Figure 6-4 .	14- Wildlife, Botany, Fire	14- Conduct surveys for northern spotted owls, goshawks and Survey and Manage species prior to project implementation in LSRs. Use survey information to best protect species while implementing prescribed fire during the most ecologically appropriate time of year.
15- Forest management activities, such as timber harvest, fire salvage, and road building, have reduced the amount of dense late-successional forest in the analysis area by 40% since the 1930s.	15- Plantations in LSRs are healthy and fast growing with stocking levels and fuel levels that contribute to a low likelihood of loss to large-scale disturbance.	15- Promote healthy, fast growing plantations that will develop into late-successional forest within LSRs. Use mechanical or manual thinning techniques to reduce stand densities. Use mechanical treatments and prescribed fire to reduce activity generated fuels; see Figure 6-5 .	15- Wildlife, Botany	15- None identified at this time.
16- Connectivity between LSRs and other reserves is good within the analysis area. Management activities have reduced late-successional habitat in some RRs which are important for connectivity across the landscape. Connectivity within LSRs is well-distributed but patchy.	16- Connectivity between LSRs and other reserves is maintained within the analysis area. Late-successional forest is promoted in the conifer zone of RRs. Connectivity within LSRs is enhanced by the development late-successional conditions (see Management Opportunity 15).	16-a. Maintain connectivity of late-successional forest across the landscape by maintaining more than 50% dispersal habitat (trees average >11" DBH, crown closure >40%) within each 5th field watershed during project planning. 16-b. Promote healthy, fast growing plantations that will develop into late-successional forest within RRs. Use mechanical or manual thinning technique to reduce stand densities. Use mechanical treatments and prescribed fire to reduce activity generated fuels; see Figure 6-5 .	16- Wildlife, Fisheries, Botany	16- None identified at this time.
17- Areas of high road density within LSRs in the analysis area contribute to habitat fragmentation and disturbance to terrestrial wildlife species.	17- Within LSRs road densities are reduced to an average of less than 2 miles/mile ² . Roads in the vicinity of known nest sites or important habitat areas are closed. Fragmentation of habitat is reduced by closing roads in areas with >4mi/mi ² .	17- Implement opportunities listed on Table E-1 of Appendix E , including road closures and road decommissioning, to reduce disturbance and/or reduce habitat fragmentation in areas that are most heavily impacted by high road densities; see Figure 6-7 .	17- Wildlife, Watershed, Fisheries	17- None identified at this time.

Table 6-6 ISSUE Terrestrial Wildlife

EXISTING SITUATION	DESIRED CONDITION	MANAGEMENT OPPORTUNITY	Benefitting Resources	Considerations
18- Nest sites for peregrine falcons and federally listed bald eagles occur within the analysis area.	18- Undisturbed nest sites for both species occur within the analysis area. Potential habitat has been surveyed for occupancy and management plans for new sites have been developed. Late-successional forest conditions and low to moderate fuel levels are promoted in RRs and in bald eagle management areas.	18-a. See Appendix E for opportunities to close roads and reduce potential disturbance to known nest sites; see Figure 6-7 . 18-b. Conduct peregrine surveys at Lower Devil's Peak and in the Red Buttes to determine if sites are occupied. Manage new sites according to peregrine falcon recovery plan. 18-c. Conduct surveys for additional bald eagle territories in potential habitat along the Klamath River. 18-d. Use prescribed fire, mechanical treatments and/or thinning to promote late-successional forest conditions within RRs and within bald eagle management areas; see Figure 6-5 .	18- Wildlife	18- None identified at this time.

Table 6-6 ISSUE Terrestrial Wildlife

EXISTING SITUATION	DESIRED CONDITION	MANAGEMENT OPPORTUNITY	Benefitting Resources	Considerations
19- At least 26 activity centers for federally listed northern spotted owls occur within the analysis area. Habitat for spotted owls has changed over time as a result of fire suppression and management activities. The lack of fire has resulted in conditions which contribute to the susceptibility of the area to catastrophic loss from wildfire or pest epidemic. Management activities have reduced suitable habitat within the analysis area by roughly 25% since the 1930s.	19- Spotted owl recovery is promoted or achieved through development and protection of suitable habitats. The amount of suitable habitat within LSRs is at the maximum amount sustainable through time. Dispersal habitat for owls is provided in the matrix, in 100-acre LSRs and in RRs.	19-a. Implement Management Opportunities 14a, 14b, and 14c from above to protect and develop suitable habitat for northern spotted owls within LSRs in the analysis area; see Figure 6-4 . 19-b. Maintain connectivity of suitable habitat across the landscape by maintaining more than 50% dispersal habitat (trees average >11" DBH, crown closure >40%) within each 5th field watershed during project planning as described in Management Opportunity 16a. 19-c. Maintain or promote late-successional forest characteristics in 100-acre LSRs and RRs to provide connectivity across the landscape (see Management Opportunity 16b); see Figure 6-5 .	19- Wildlife, Fire	19- None identified at this time.
20- Surveys for murrelets have not been conducted in the analysis area and no murrelets have been incidentally located. A portion of the analysis area is within murrelet Zone 2. Critical Habitat is located in the upper Thompson Creek watershed.	20- The eastern extent of the murrelet's range is well defined and habitat is identified. Recovery of murrelets is promoted through development and protection of habitat. Habitat in LSRs is at the maximum amount sustainable through time.	20-a. Implement Management Opportunities 14a, 14b, and 14c from above to protect and develop late-successional habitat within LSRs in the analysis area; see Figure 6-4 . 20-b. Protect habitat within designated Critical Habitat areas from loss due to wildfire. Use prescribed fire and mechanical treatments to reduce extreme fuel loadings. Use manual or mechanical thinning to reduce densities or to promote the development of habitat; see Figure 6-4 . 20-c. Use information from the murrelet range and distribution study to more clearly define the eastern edge of the murrelet range and to identify suitable/occupied habitat.	20- Wildlife	20- None identified at this time.
21- Ten northern goshawk activity centers have been identified in the analysis area. Habitat conditions are similar to those described above for spotted owls. Dense conifer stands as a result of fire suppression may limit the ability of goshawks to forage under the canopy.	21- The amount of suitable habitat within LSRs is at the maximum amount sustainable through time, more open stands are maintained on south and west aspects through the use of prescribed fire. Dispersal habitat is provided in the matrix, in 100-acre LSRs and in RRs.	21-a. Implement Management Opportunities 14a, 14b, and 14c from above to protect and develop suitable habitat for northern goshawks within LSRs in the analysis area; see Figure 6-4 . 21-b. Management Opportunities 16a, 16b, and 19c from above are implemented to provide dispersal habitat across the landscape; see Figure 6-5 . 21-c. Conduct surveys for goshawks in <i>Forest Plan</i> designated Goshawk Management Areas (GMAs) to determine status. If GMAs are occupied, manage according to <i>Forest Plan</i> direction. If GMAs are not occupied consider removal of GMA from the Forest network; see Figure 6-5 .	21- Wildlife	21- None identified at this time.
22- Habitat for willow flycatchers occurs along the Klamath River and its tributaries, in higher elevation streamside alder/willows, and in high elevation meadows. Willow flycatchers have been captured at mist netting stations in Seiad. One nest has been located in the analysis area in Seiad.	22- Riparian reserves and high elevation meadows provide nesting habitat and dispersal corridors across the landscape. Birding opportunities are identified and promoted within the analysis area. Important migratory and dispersal routes along the Klamath River are developed and maintain through cooperative efforts with private landowners.	22-a. Promote willow habitat along streams where management activities or flood damage have removed habitat. 22-b. Maintain or improve habitat in high elevation meadows, reduce encroachment of conifer species to maintain desired opening sizes (20 acres or larger is most desired); see Figure 6-5 . 22-c. Manage riparian shrub habitats in patches with interspersed open spaces rather than in contiguous blocks. Openings can be created by cutting paths through dense thickets. 22-d. Develop educational and interpretive opportunities for enjoyment of the unique birding opportunities along the Klamath River. 22-e. Develop a wildlife viewing station/interpretive site at the Sluice Box river access located along the Klamath River; see Figure 6-8 .	22- Wildlife, Fish, Watershed	22- Manipulation of riparian shrub habitat should occur outside of the breeding season and not in areas recently occupied by nesting birds. Work with private landowners along the Klamath. Coordinate traditional harvest needs (e.g. willows) to enhance wildlife habitats.
23- Potential habitat for bats, such as caves, buildings, abandoned mine shafts, and late-successional forest occur within the analysis area. Little is currently known about the occurrence and distribution of bats in the area.	23- Undisturbed roost sites, such as caves, abandoned mines, and abandoned buildings occur in the landscape. Forest structure in the vicinity of roost sites is maintained. Late-successional forest, with adequate snags, dying trees and logs, occurs within the landscape.	23-a. Survey caves and abandoned mine shafts for potential bat habitat. Develop management plans for occupied sites to minimize disturbance from humans. 23-b. Abandoned mines that pose hazards to the public should be closed. Survey these sites and if they are occupied by bats close them with devices, such as bat gates, which allow continued use of the habitat by bats. 23-c. Implement Management Opportunities 14a, 14b, and 14c from above to protect and develop late-successional forest habitats that are suitable for forest dwelling bat species; see Figure 6-4 .	23- Wildlife, Humans	23-

Table 6-6 ISSUE Terrestrial Wildlife

EXISTING SITUATION	DESIRED CONDITION	MANAGEMENT OPPORTUNITY	Benefitting Resources	Considerations
24- Del Norte and Siskiyou Mountains salamanders occur within the analysis area. Habitat for salamanders, in the form of talus substrates, is scattered throughout the area. Survey and Manage mollusk species are also expected to occur in the analysis area. Very little is known about mollusks in the area.	24- Talus habitats are protected within the landscape, especially older more stable talus that provides the best habitat. Forest structure is maintained over occupied habitats to provide protection of microclimate. Forest management activities, including fire, are conducted and is consistent with maintaining viability of salamanders and mollusks.	24-a. Work with researchers to conduct surveys for salamanders and mollusks in the watershed, use information to more clearly define the ranges of the species and any potential overlap ("zone of contact"). 24-b. Use most recent research information and current management recommendations to maintain adequate forest structure around occupied habitats during project implementation. 24-c. Work with researchers to gather data concerning salamander and mollusk responses to prescribed burning. Conduct surveys before and after prescribed fire projects to gain understanding of fire effects to these species.	24- Wildlife, Fire, timber	24- Work closely with ROD taxa groups, research and species specialists to develop survey strategies and experimental projects.
25- Black-tailed deer are a species of local concern within the analysis area. Foraging habitat is expected to be the limiting factor for deer. Road densities in some areas of the landscape have reduced the effectiveness of available habitat.	25- Cover for deer is maintained in LSRs, RRs and across the landscape. High quality forage exists and is maintained through prescribed burning and harvested openings. Road densities and associated disturbances are reduced in the analysis area.	25-a. Implement Management Opportunities 14a, 14b, and 14c from above to protect and develop late-successional forest habitats that are suitable for cover; focus here is on maintaining more open stands on south and west aspects where deer may find transitory forage as a result of thinning and frequent underburning; see Figure 6-6 . 25-b. Take advantage of forest management practices in the matrix to increase deer forage opportunities in newly created openings. Work with Forest Service managers and outside sources to strategically locate openings, and propose enhancement projects (e.g. seeding). 25-c. Use manual thinning techniques and prescribed fire to reduce conifer encroachment and increase forage in meadows and brush fields; see Figure 6-6 . 25-d. Employ mechanical manipulation techniques and prescribed burning on brush vegetation for deer winter range and transitory range improvement; see Figure 6-6 . 25-e. Refer to Appendix E for opportunities to close or decommission roads and reduce potential disturbance to deer; see Figure 6-7 .	25- Wildlife, Recreation, Humans	25- Work with California Dept. of Fish and Game, local sportsmen groups, and The Mule Deer Foundation to develop habitat improvement projects.
26- Elk have been reintroduced on the Forest, herds to the north, east and west are expanding into the analysis area. Elk are a species of local concern within the analysis area. Foraging habitat is declining in the area. Road densities in some areas of the landscape have reduced the effectiveness of available habitat.	26- High quality forage exists and is maintained through thinning, prescribed burning and harvested openings. Natural meadows and brush fields are maintained by frequent fire. Road densities and associated disturbances are reduced in the analysis area.	26-a. Field check (validate) the elk habitat model used in this analysis in selected locations. 26-b. Implement Management Opportunities 14a, 14b, and 14c from above to enhance elk habitat. Emphasis here is on improving transitory range on south and west aspects; see Figure 6-6 . 26-c. Implement Management Opportunity 25-b from above, with emphasis on foraging habitat in the matrix. 26-d. Implement Management Opportunity 25-c from above to enhance forage and calving habitat in high elevation meadows and in natural openings; see Figure 6-6 . 26-e. Refer to Appendix E for opportunities to close or decommission roads and reduce potential disturbance to elk; see Figure 6-7 .	26- Wildlife, Recreation, Humans	26- Work with California Dept. of Fish and Game, local sportsmen groups, and The Rocky Mountain Elk Foundation to develop habitat improvement projects.
27- There are seven plant species of concern occurring within the analysis area and two botanical special interest areas (SIAs).	27- Sensitive plant populations are stable and increasing in size and distribution. Suitable habitats for plants are intact and are managed to provide recruitment opportunities. Natural vegetative features of SIAs are maintained or enhanced. Education and interpretive information on the ecological value of SIAs is provided.	27-a. Protect and enhance sensitive plant populations and habitat by controlling the spread of noxious weeds and by reducing the potential for loss due to wildfire. 27-b. Evaluate SIAs for potential threats from insects, disease, spread of noxious weeds, wildfire, and fire suppression. Control threats if necessary to maintain the unique features of the SIA; see Figure 6-5 .	27- Botany	27- None identified at this time.
28- Several introduced species, or species that have expanded their range, occur within the analysis area and may be a threat to native species. Scotch broom, a noxious weed, occurs in the analysis area and may be a threat to native plant diversity.	28- Introduced, exotic, and noxious species are controlled and do not present a threat to native species or species diversity.	28- Develop strategies to control introduced, exotic or noxious species within the analysis area so they do not threaten native species or species diversity.	28- Botany	28- Work with county, state and private to control spread of noxious weeds.

Table 6-7 ISSUE Roads

EXISTING SITUATION	DESIRED CONDITION	MANAGEMENT OPPORTUNITY	Benefitting Resources	Considerations
29- High road mileage, high road densities, and decreasing maintenance budgets have reduced road maintenance to inappropriate levels.	29- A stable road system that meets rural access, community/public access needs, resource protection, and administrative needs and minimizes sediment delivery to stream channels, and reduces recurring maintenance costs.	29-a. Continue road maintenance to facilitate access needs and resource protection. 29-b. Utilize list in Appendix E , as well as additional site-specific information to develop opportunities for road improvements, including culvert upgrades, outcropping, surfacing, reinforcing fills, etc. 29-c. Utilize list in Appendix E , as well as additional site-specific information to develop proposed actions for environmental analysis that lead to decisions on decommissioning of roads; see Figure 6-7 .	29- All	29- Work closely with local community members during project development. Maintain emergency alternative access routes (China Creek, Low Gap)

Table 6-8 ISSUE Human Uses

EXISTING SITUATION	DESIRED CONDITION	MANAGEMENT OPPORTUNITY	Benefitting Resources	Considerations
30- A wide variety of recreational opportunities exist in the analysis area including: Wilderness, Scenic Byway, PCT, Wild & Scenic River, and others. Some of these recreational facilities and opportunities are little known and under utilized.	30- Recreational opportunities are known to potential visitors thereby increasing use; economic benefits are realized by local communities.	30- A pro-active Forest marketing strategy is developed to inform potential users of the recreation niches that the Klamath NF and the TSG WA area offer. Involve local community members in development and marketing of recreational opportunities.	30- Local Community	30- Work closely with community groups, (i.e. Jefferson Scenic Byway)
31- Currently some areas do not meet Visual Quality Objectives (VQOs) due to past management activities that were done prior to development of these objectives.	31- Previously disturbed areas meet VQOs.	31- Develop and implement management strategies for areas of concentrated use to rehabilitate landscapes not meeting desired VQOs. Design new projects to meet VQOs; see Figure 6-8 .	31- Recreation, Local Community	31- Develop priorities consistent with land allocation goals.
32- Some existing trails need work to meet standards. Use of the local trail system is an important feature to local residents.	32- The trail system is maintained, improved, etc. to support recreation management objectives.	32-a. Replace/repair 3 bridges across Grider Creek on PCT; b. brush Portuguese Trail and upper portion of PCT along Grider Creek; c. restore road access to PCT at Cold Springs trailhead; d. Investigate feasibility of PCT bridge across Klamath River; see Figure 6-8 .	32- Recreation, Local Community	32- None identified at this time.
33- Two new river access points (Rocky Point, Sluice Box) are being constructed to provide "bare bones" access to the river. Depending on the amount of use, they may need further development to enhance the recreation experience.	33- Recreation user needs are met and the experience is enhanced through quality facilities.	33- Monitor use to determine need for additional improvements (i.e. accessible toilets); see Figure 6-8 .	33- Recreation, Local Community	33- Graveling and signs to be added this fiscal year.
34- Three of four campgrounds need varying levels of work to either meet minimum standards for accessibility or user comfort.	34- Recreation facilities meet user expectations	34- Improve campgrounds with the following facilities: 34-a. <u>Grider Creek C/G</u> : install two accessible toilets; replace four to five tables; install five fire grills. 34-b. <u>O'Neil C/G</u> : install two accessible toilets; replace two to three tables; improve water well; deepen camping spurs. 34-c. <u>Sara Totten C/G</u> : convert existing four hole toilet to two hole/ changing room; replace six fire rings; improve water taste; see Figure 6-8 .	34- Recreation, Local Community	34- Utilize meaningful Measures information to develop projects.
35- A variety of special forest products such as poles, boughs, and Christmas trees are collected in the analysis area.	35- Local needs/uses are met.	35- Continue to make special forest products available for sale to the public for personal use under special use permits. Explore market opportunities for special forest products, and develop a strategy for protecting the resource and allowing commercial use.	35- Local Community, Karuk Tribe	35- Involve interested local community members.
36- Readily accessible and available firewood is in short supply.	36- A regular supply of available firewood cutting opportunities is provided.	36- Establish firewood cutting areas along open roads where firewood cutting can be used as a tool to accomplish Forest Management.	36- Local Community	36- Focus on areas with high densities of hardwoods.
37- Special-use permits currently exist in the analysis area for water transmission lines.	37- High quality water is maintained for domestic use.	37- Mitigate management activities to ensure high water quality is maintained for permittees.	37- Local Community	37- None identified at this time.
38- Twenty-seven percent of matrix lands are composed of existing plantations. These plantations, which are a future investment for the timber program, are at risk from large stand-replacing fires.	38- Plantations are managed to maximize growth and are resilient to fire effects.	38- Use adaptive management silvicultural treatments to develop stands that are resilient to fire. Refer to Management Opportunity 10; see Figure 6-2 .	38- Timber	38- None identified at this time.

Table 6-8 ISSUE Human Uses

EXISTING SITUATION	DESIRED CONDITION	MANAGEMENT OPPORTUNITY	Benefitting Resources	Considerations
39- The <i>Forest Plan</i> originally identified 36,700 acres of matrix land in the analysis area that are intended to provide sustainable timber outputs. This analysis has identified 3,000 acres as being realistically available in the next ten years.	39- A seral stage distribution that sustains a long-term, even flow of timber commodities commensurate with site capabilities and administrative constraints. This will also contribute to community stability.	39- Develop and implement an environmentally sustainable timber program based on site potential seral stage distribution and management objectives; see Figure 6-8 .	39- Timber, Local Community	39- Timber sales are planned and administered to meet ACS objectives.
40- Important traditional use areas are not always identified and protected during management activities. Some no longer exist due to past land management activities.	40- Important traditional use areas are identified and managed to benefit Tribal members.	40-a. Identify sensitive sites as appropriate. 40-b. Coordinate closely with tribe during project design and implementation to protect important sites. 40-c. Maintain basketry resources (i.e., willow, hazel, ferns, beargrass) to meet Tribal needs.	40- Karuk Tribe	40- Incorporate these concerns into the MOU.

Table 6-9 Analysis Team Emphasis Ratings*

Management Opportunity	Ques. 1	Ques. 2	Ques. 3	Ques. 4	Ques. 5	Final Emphasis Rating
1	H	H	M	H	M	H-
2	H	M	M	M	M	M
3	M	M	M	M	M	M
4	H	H	H	M	H	H
5	M	M	M	L	M	M
6	M	M	M	M	H	M
7	M	M	M	H	H	M+
8	M	M	M	M	M	M
9	H	H	H	H	H	H Red Flag
10	H	H	H	M	H	H
11	M	M	M	M	M	M
12	H	H	M	M	M	M+
13	H	H	H	M	M	H-
14	H	H	H	H	H	H Red Flag
15	H	M	H	M	M	M+
16	M	M	M	M	M	M
17	M	M	M	M	M	M
18	M	M	M	M	M	M
19	M	M	M	M	M	M
20	L	L	L	M	M	L+
21	M	M	M	M	M	M
22	M	L	L	M	M	M-
23	M	L	L	M	M	M-
24	M	H	M	H	M	M+
25	M	M	H	M	M	M
26	M	M	H	M	M	M
27	M	M	M	M	M	M
28	H	M	M	M	M	M
29	H	H	M	M	H	H-
30	L	L	M	M	H	M
31	L	L	M	L	M	L+
32	M	M	H	M	M	M
33	L	L	M	L	M	L+

Table 6-9 Analysis Team Emphasis Ratings*

Management Opportunity	Ques. 1	Ques. 2	Ques. 3	Ques. 4	Ques. 5	Final Emphasis Rating
34	L	M	M	L	M	M-
35	L	L	M	M	M	M-
36	M	M	H	M	H	M+
37	M	M	M	M	H	M
38	H	H	H	M	H	H
39	M	H	H	M	H	H-
40	M	M	M	M	H	M

Table 6-10 Public Priorities*

Management Opportunity	Number of Dots	Management Opportunity	Number of Dots
1	1	28	3
2b	2	29	11
3	1	30	3
6	1	31	1
12	1	32	7
13	1	33	1
16	1	35	3
17	1	36	9
22d	4	37	1
22e	1	38	2
23a	1	39	12
23b	1	40	1

* See Step 6 - Recommendations text, page 6-1, for explanation of Emphasis Rating and Public Priorities tables.

This page intentionally left blank