

Table 6-1 ISSUE - Hillslope Processes

EXISTING SITUATION	DESIRED CONDITION	MANAGEMENT OPPORTUNITY	BENEFITTING RESOURCES	PROJECT –LEVEL CONSIDERATIONS	PRIORITY RATING
<p>1- Four sub-watersheds have been identified as impaired (Lower Horse, Middle Creek, Buckhorn Creek, & Doggett Creek); high road density, high percent of channels with four or more road crossings, timber harvest, scoured channels, and fire are the primary contributors.</p>	<p>1- Management activities in impaired sub watersheds are neutral to or contribute to recovery. These watersheds recover so they are no longer considered impaired. Hillslopes are re-vegetated and erosion and mass-wasting rates have returned to near background levels. Channels have normal levels of sediment and sediment discharge. Channel location and configuration is stable and riparian vegetation has regrown.</p>	<p>1a- Use Appendix E - Roads Analysis Process, to repair, upgrade, decommission, or place in seasonal or year around closure roads contributing to the impairment of sub watersheds, following a site specific analysis; see Figure 6-1.</p> <p>1b- Locate and design future management activities to improve or maintain sub watershed conditions. Examples; avoid unstable lands, avoid constructing new roads, use prescribed fire and vegetation management to reduce fuel loadings. Manage planted stands in previously burned and harvested areas to maximize root support and tree growth to promote hillslope stability and hydrologic function; see Figure 6-1.</p> <p>1c- Monitor conditions of sub watersheds. Use <i>Road Sediment Source Inventory and Risk Assessment</i> to identify high risk road areas that are a threat watershed health and complete inventories on those impaired watersheds and roads that have not been assessed. Design road improvement projects so roads are resistant to storm damage. Prioritize restoration based on an analysis of ecologic and economic cost effectiveness.</p>	<p>1- Hillslope Processes, Aquatic Species, Human Uses</p>	<p>1- Treat fuels while maintaining soil cover and large woody material for habitat.</p>	<p>1- Team Rating HIGH</p> <p>Public Rating. N/A</p>
<p>2- Some roads are excess to current management needs and not consistent with current land uses. Some roads needed for the permanent transportation system are in need of repair or restoration to minimize their watershed impact. Increased rates of erosion and sedimentation are especially a concern where roads are associated with unstable lands.</p>	<p>2- Resource impacts from roads are minimized while maintaining a road system necessary to manage National Forest lands.</p>	<p>2a- Use Appendix E - Roads Analysis Process to improve, decommission, or gate roads to reduce aquatic resource impacts and meet land allocation goals; see Figure 6-6.</p> <p>2b- Use <i>Road Sediment Source Inventory and Risk Assessment</i> to identify and implement road improvement projects, including road culvert upgrades, rock surfacing, road surface drainage improvements, fill stabilization, etc.</p> <p>2c- Inventory those roads/road sections and sub-watersheds that have not had a <i>Road Sediment Source Inventory and Risk Assessment</i> completed see Figure 6-1.</p> <p>2d- Design and implement roads projects (both reconstruction and new construction) to ensure that impacts to Riparian Reserves, unstable lands and stream channels are minimized. Avoid unstable lands whenever possible.</p>	<p>2- Hillslope Processes, Aquatic Species, Terrestrial Wildlife, Transportation Management, Human Uses</p>	<p>2- Geotechnical input is used for any reconstruction or new construction. In LSRs, balance need for management access with improvement or recovery of watershed conditions.</p>	<p>2- Team Rating HIGH</p> <p>Public Rating. N/A</p>
<p>3- Catastrophic wildfire has the potential to cause watershed damage, increase erosion and negatively impact downstream resources.</p>	<p>3- Fuel conditions are such that risk to hillslope processes by catastrophic wildfire is small throughout the watershed.</p>	<p>3- Identify and treat high fuel loading to reduce the risk of catastrophic fire, especially on unstable landforms. See Table 6-4, Forest Health and Fire...opportunities numbered 13, 15, 16; Table 6-5, Late-Successional Habitat, opportunities numbered 19, 20; Table 6-7, Terrestrial Wildlife and Plants, opportunities numbered 22,25; Table 6-8, Human Uses, opportunities numbered 44, 45, 46.</p>	<p>3- Hillslope Processes, Aquatic Species, Terrestrial Wildlife, Human Uses</p>	<p>3- None identified at this time</p>	<p>3- Team Rating HIGH</p> <p>Public Rating. HIGH</p>

Table 6-2 ISSUE Riparian and Stream Areas

EXISTING SITUATION	DESIRED CONDITION	MANAGEMENT OPPORTUNITY	BENEFITTING RESOURCES	PROJECT-LEVEL CONSIDERATIONS	PRIORITY RATING
4- High amounts of fine sediment are reducing habitat quality for many aquatic species in Horse Creek and its tributaries. The primary source of this sediment is from roads and landslides.	4- Habitat is sufficient for sustainable populations of indigenous aquatic species. Fine sediment input, accumulation, and transportation are reduced to reference levels.	4a Use Appendix - E Roads Analysis Process to identify road repair or decommissioning opportunities on federal lands within the analysis area to diminish sediment sources, see Figure 6-6 . 4b- Promote and/or maintain vegetative growth, especially conifer, on burned land and on active landslides.	4- Aquatic Species, Hillslope Processes, Human Uses	4- None identified at this time.	4- Team Rating: MED. Public Rating. N/A
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. Project level Riparian Reserve delineation should be completed in areas where management activities are planned.	5- Hillslope Processes, Aquatic Species, Terrestrial Wildlife	5- None identified at this time.	5- Team Rating: MED. Public Rating. N/A
6- Most tributaries within analysis area provide important cold, high quality water to the Klamath River. Horse Creek also provides significant perennial connection to mainstem Klamath River.	6- Tributaries continue to provide cold, high quality water and perennial connection to the Klamath River	6- Design future management activities to maintain water quality, including suitable water temperatures. Protect existing mid to late seral stands from catastrophic wildfire. Insure the perennial connection of tributaries within Horse Creek and smaller tributaries to the Klamath River are maintained. Monitor crucial cold water streams;	6- Aquatic Species	6- None identified at this time.	6- Team Rating: MED. Public Rating. N/A
7- Low flows and high temperatures in the main stem of the Klamath River are negatively impacting fish rearing, holding, and at times, spawning habitat and fish out migration patterns. Flow levels in the Klamath River are primarily the result of water uses upriver, outside of the analysis area.	7- Adequate flows and temperatures to maintain aquatic conditions, fish spawning, holding, rearing and growth.	7- Forest Service participation in FERC relicensing for upriver dams/power plants.	7- Aquatic Species	7- None identified at this time	7- Team Rating: MED. Public Rating. N/A
8- Riparian vegetation is not at full site potential in some portions of riparian reserves.	8- Riparian vegetation condition along Horse Creek and its tributaries, tributaries to the Klamath River, and the main stem Klamath are at full potential.	8- Restore native vegetation, especially conifers, in Riparian Reserves. Increase the conifer component in riparian stands. Maintain conifer growth in riparian reserves located in plantations harvested prior to the establishment of Aquatic Conservation Strategy objectives (usually along intermittent streams, and in various plantations scattered throughout the analysis area, including those in LSRs);	8- Aquatic Species, Hillslope Processes, Wildlife	8- None identified at this time	8- Team Rating: MED. Public Rating. N/A
9- Old-Growth Riparian Special Interest Area (SIA) is the only existing riparian SIA in the KNF.	9- Maintain the SIA within natural range of variability as natural processes occur.	9- Protect the SIA by ensuring healthy, non-risk stands in adjacent areas. Protect the SIA by ensuring that man-caused landslide and debris torrent events are minimized.	9- Aquatic Species, Terrestrial Wildlife, Botanical species	9- None identified at this time.	9- Team Rating: LOW Public Rating. N/A

Table 6-3 ISSUE Aquatic Dependent Species

EXISTING SITUATION	DESIRED CONDITION	MANAGEMENT OPPORTUNITY	BENEFITTING RESOURCES	PROJECT-LEVEL CONSIDERATIONS	PRIORITY RATING
10- Populations of coho and steelhead have declined from historical numbers. Lost and degraded habitat, including critical upstream areas, has negatively impacted the amount of habitat available for critical life stages and has generally decreased the quality of rearing, holding and over-wintering habitat. Spring Chinook and summer steelhead are largely extirpated from the analysis area.	10- Current fish range and species communities resemble historic ranges and communities. Sustainable populations of summer steelhead and spring Chinook exist within the sub-basin.	10- Coordinate with the California Department of Fish and Game, US Fish and Wildlife Service, Klamath river Task Force, and local landowners to: a) Improve summer flow amounts and decrease high water temperatures within the Klamath River and appropriate tributaries, and b) Restore critical, low-gradient areas to allow rearing, holding, and to provide over-wintering habitat for use by analysis area and upstream stocks.	10- Aquatic Species	10- None identified at this time.	10- Team Rating: HIGH Public Rating: N/A
11- Barriers to habitat use by anadromous fish exist in Horse Creek and Collins Creek, and possibly elsewhere. It is unknown if all diversions are screened at this time.	11- Habitat access is available to anadromous stocks and resembles historic access. All diversion ditches are screened, especially within anadromous reaches.	11- Investigate and repair as needed, passage barriers or restrictions to upstream and downstream fish migration, as located in lower Horse and Collins Creeks. Remove or improve passage where man-made restrictions or barriers exist. Screen diversions on fish-bearing stream reaches within the analysis area.	11- Aquatic Species	11- None identified at this time	11- Team Rating: HIGH Public Rating: N/A
12- The possibility for altered peak flows as a result of management activities within the sub-basin and analysis area exist. Area biologists are unable to offer firm data to NMFS and other agencies during consultation regarding peak flows and substrate stability (impacts to redds, fry survival, etc.). Impacts to salmonid egg survival may occur due to substrate instability as a result of dredger mining operations.	12- Peak flows occur at a reference level of frequency and do not cause abnormal scouring of salmonid redds. Dredger mining activities and procedures are well coordinated with salmonid life history needs.	12a- Update habitat quality and quantity descriptions within fish bearing range. Work with earth scientists to quantify management activities effects on aquatic habitat. 12b- Work with California Department of Fish and Game to insure dredger tailing piles are not attractive to salmonid spawning, especially fall Chinook. (See Harvey and Lisle, 1999).	12- Aquatic Species, Hillslope Processes	12- None identified at this time	12- Team Rating: MED. Public Rating: N/A

Table 6-4 ISSUE - Forest Health and Fire Disturbance Risk and Hazard

EXISTING SITUATION	DESIRED CONDITION	MANAGEMENT OPPORTUNITY	BENEFITTING RESOURCES	PROJECT-LEVEL CONSIDERATIONS	PRIORITY RATING
13- There are approximately 9,000 acres of plantation found both on Forest Service and private lands in the analysis area. These investments in the Forests future are vulnerable to disturbances, esp. fire.	13- Plantations are protected from catastrophic fires. Plantations are managed to promote tree growth and resiliency to fire disturbances.	13- Thin plantations and to the extent possible remove fuels to develop conditions that are resilient to fire. Strategically remove fuels (along roads and/or ridges) to break-up fuel continuity and provide defensible buffers to high hazard areas. Utilize equipment such as masticators to thin stands and reduce fuel bed depths which promotes growth in the remaining stand and also speeds up decomposition of the thinned material. See Figure 6-2.	13- Wildlife, Aquatics, Human, Fire	13- - None identified at this time.	13- Team Rating: HIGH Public Rating: HIGH
14- Most of the residences within the analysis area are found in the lower elevations and usually in areas with naturally occurring flashy fuels. Most residents are concerned with high hazard fuels conditions that exist in the analysis area, but do not know how to eliminate the hazard or protect themselves from it. Threats from wildfire exist for residents, private timber lands, National Forest lands and for firefighters protecting these resources.	14- 1 st priority- Safety of firefighters and residents of this area is provided for. Next are their homes, and property as well as the private timber lands and National Forest within the analysis area are protected from the affects of catastrophic wildfire.	14- Fire prevention, suppression and fuels personnel work closely with the local volunteer fire department and residents to develop defensible spaces and fire safe conditions in and around residential areas. Host public meetings to discuss defensible space and sponsor work days to reduce fuels and provide defensible space around residences. Work with other private landowners to co-develop fuels treatment projects.	14- Human and Fire	14-- None identified at this time.	14- Team Rating: HIGH Public Rating: HIGH
15- Due to recent timber stand improvement projects mostly on private timberlands within the Buckhorn Burn area, high hazard fuels conditions exist that will undoubtedly lead to the loss of these plantations and puts adjacent forested stands in jeopardy of being lost as well to wildfire. The loss of these plantations will also impact the growing elk herd which has been utilizing the plantations for forage and cover.	15- Plantations that are resilient to fire disturbances and provide good quality habitat for the growing elk herd remains.	15- Work with Private Land Managers and possibly Rocky Mountain Elk Foundation to develop projects on there lands as well as lands administered by the Forest Service to remove or reduce these fuels and improve habitat conditions within plantations. See Figure 6-2.	15- Wildlife, Aquatics, Human, Fire	15- None identified at this time.	15- Team Rating: HIGH Public Rating: N/A
16- 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 conifers. Change in stand structure has been most evident on south and west aspects and higher on slopes where historically stands were more open. High levels of mortality have already been identified in late-Successional forest conditions. These conditions contribute to the susceptibility of the area to catastrophic loss from pest epidemic and/or wildfire, especially susceptible during drought conditions.	16- Late-successional forest conditions are promoted 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.	16- In late-successional forest stands, reduce ground fuels and ladder fuels where they contribute to risk of large-scale disturbance events in reserves. Use prescribed fire to reduce fuels, use hand-piling or mechanical treatments prior to burning where fuel loadings are extreme. See Figure 6-2. 16b- Protect mid- and early seral vegetation in LSRs from loss to large-scale disturbance events. Use thinning to reduce stand densities, use prescribed fire in mid- and early successional 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. 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. See Figure 6-2.	16- Wildlife, botany, fire, fisheries	16- 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. Coordinate surveys with private landowners.	16- Team Rating: HIGH Public Rating: N/A

Table 6-4 ISSUE - Forest Health and Fire Disturbance Risk and Hazard

EXISTING SITUATION	DESIRED CONDITION	MANAGEMENT OPPORTUNITY	BENEFITTING RESOURCES	PROJECT-LEVEL CONSIDERATIONS	PRIORITY RATING
<p>17- Fire suppression efforts have kept 92% of fire starts to small areas for approximately 80 years. This success has allowed for dramatic changes to occur in the vegetation communities;</p> <p>Mixed Chaparral- dense, decadent shrubs, loss of grass & forbs, lowered wildlife values, high fuel hazard.</p> <p>Montane Hardwood- high accumulations of natural litter, mortality occurring in encroaching conifers, loss younger oaks, grass & forbs, which lowers wildlife values, moderate fuel hazard.</p> <p>Montane Hardwood/Conifer- increasing mortality in conifers, high litter accumulations, loss of grass & forbs in understory, lowered wildlife values, moderate to high fuel hazard.</p> <p>Ponderosa Pine Mixed Conifer- dense stands, high litter and larger fuel accumulation, increasing mortality, loss of grass and understory oak & shrubs, lowered wildlife values, slash accumulations from partial cutting, moderate to high fuel hazard.</p> <p>Douglas-fir Mixed Conifer- over-dense conditions, increasing mortality, high litter and larger fuel accumulation, encroaching white fir, loss of understory diversity, slash accumulations from partial cutting, lower wildlife value, high fuel hazard.</p> <p>True fir- over-dense conditions, decadent conditions, high mortality, high litter and larger fuel accumulation, set-up for catastrophic loss taking it back to early seral, high fuel hazard.</p> <p>Sub alpine- increased decadence, mortality, litter and larger fuels in flower pot areas.</p> <p>Montane Meadow- 25% loss of meadows due to conifer encroachment since 1944, loss of wildlife habitat.</p> <p>Montane Riparian- where this community is still found a higher accumulation of fuels has developed. Fire Behavior Potential Modeling identified 66% of the analysis area as having moderate to high fire behavior potential. Due to the high number of fire starts, the analysis area is a high risk for fire. It is possible for large catastrophic fires to move from watershed to watershed.</p>	<p>17- Vegetation communities that are maintained with managed fire, remove decadence, improve forest health and wildlife values. Fire adapted vegetation communities that are resilient to the affects of fire and drought disturbances. Stand conditions that do not promote high severity fires. Catastrophic fires that initiate in the analysis area are limited in size and severity. A road system that provides good access and control points for fire suppression and fuels treatment. A system of shaded fuel-breaks are established and maintained to ensure fire is able to play its natural role in the analysis area.</p>	<p>17a- Thin and remove fuels in areas where appropriate and feasible.</p> <p>17b- Utilize key ridges, existing fire lines, and roads to develop a system of Modified Fuel Profile Zones that will be effective fuel breaks for underburn projects and/or wildfires. See Figure 6-3.</p> <p>17c- Use the Roads Analysis Process (Appendix E) to improve access for fire suppression and strategic use of roads for prescribed fire and suppression efforts. See Figure 6-3.</p> <p>17d- Establish fire return intervals that mimic the historic fire regime. See Figure 6-3.</p> <p>17e- Take advantage of funding available through grants, private foundations such as Rocky Mountain Elk, and other sources to implement projects to reduce fuels, improve forest health and wildlife habitat.</p>	<p>17- Wildlife, Aquatics, Human, Fire</p>	<p>17- None identified at this time.</p>	<p>17- Team Rating: HIGH</p> <p>Public Rating: HIGH</p>
<p>18- Currently, prescribed burn areas are delineated within landownership boundaries, not by geographic and/or vegetative conditions. This does not allow fire to be utilized effectively as an ecological process.</p>	<p>18- Fire is utilized as an ecological process across landownership boundaries.</p>	<p>18- Pursue cooperative fuels management projects with landowners to develop fuel management projects that will effectively utilize fire as a natural ecological process.</p>	<p>18- Human, Wildlife, Forest Health, Fire</p>	<p>18- None identified at this time.</p>	<p>18- Team Rating: HIGH</p> <p>Public Rating: N/A</p>

Table 6-5 ISSUE - Late-Successional Habitat

EXISTING SITUATION	DESIRED CONDITION	MANAGEMENT OPPORTUNITY	BENEFITTING RESOURCES	PROJECT-LEVEL CONSIDERATIONS	PRIORITY RATING
<p>19- Past wildfire and 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 roughly 50%, on both public and private lands, since the 1930's.</p>	<p>19- Early and mid-successional stands 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. Previously partial cut stands in LSRs are healthy and sustainable.</p>	<p>19a- 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 6-4.</p> <p>19b- Mid- and early successional stands adjacent to older stands are treated, through thinning and prescribed fire, to develop larger blocks of late-successional habitat within LSRs. See Figure 6-4.</p> <p>19c- Use mechanical or manual fuels treatment methods and underburning to reduce heavy fuels buildup in previously partial cut stands in LSRs. See Figure 6-4.</p> <p>19d- In mature forest stands, reduce ground fuels and ladder fuels where they contribute to risk of large-scale disturbance events. Use prescribed fire to reduce fuels, use hand-piling or mechanical treatments prior to burning where fuel loadings are extreme. See Figure 6-4.</p>	<p>19- Wildlife, botany</p>	<p>19- 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 opportunities.</p>	<p>19- Team Rating: HIGH</p> <p>Public Rating: N/A</p>
<p>20- Connectivity between LSRs and other reserves is provided over 50% of the Matrix, but the quality of the dispersal habitat is lacking due to preponderance of early and mid-successional conditions within the analysis area. Management activities have reduced late-successional habitat in some RRs that are important for connectivity across the landscape. Connectivity within the Johnny-O'Neil and Collins-Baldy LSRs is weak.</p>	<p>20- Connectivity between LSRs and other reserves is developed and 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 item 25 above).</p>	<p>20a- Maintain connectivity of late-successional forest across the landscape by maintaining more than 50% dispersal habitat in the matrix (trees average >11" DBH, crown closure >40%) within the Horse Creek Analysis Area during project planning.</p> <p>20b- Enhance late-successional conditions in the matrix, in areas that meet dispersal habitat criteria (11"-40%) by thinning dense stands and reducing fuels.</p> <p>20c- Promote healthy, fast growing plantations that will develop into late-successional forest within the Matrix, RRs and 100-acre LSRs. Use mechanical or manual thinning technique to reduce stand densities. Use mechanical treatments and prescribed fire to reduce activity generated fuels. See Figure 6-4.</p> <p>20d- Promote connectivity of late-successional habitat within LSRs using opportunities 19a – 19c above.</p>	<p>20- Wildlife, fisheries, botany</p>	<p>20- Conduct surveys for NSOs (per Baseline) and survey and manage species prior to project implementation. Use survey information to best protect species while implementing opportunities.</p>	<p>20- Team Rating: MED.</p> <p>Public Rating: N/A</p>
<p>21- Areas of high road density within LSRs in the analysis area contribute to habitat fragmentation and disturbance to terrestrial wildlife species.</p>	<p>21- Within LSRs road densities are reduced to an average of less than 2 miles/mile² where possible. 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/mi².</p>	<p>21- Implement opportunities listed in Appendix E - Roads Analysis Process, 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.</p>	<p>21- Wildlife, watershed, fisheries</p>	<p>21- None identified at this time.</p>	<p>21- Team Rating: MED.</p> <p>Public Rating: N/A</p>

Table 6-6 ISSUE - Terrestrial Wildlife and Plants

EXISTING SITUATION	DESIRED CONDITION	MANAGEMENT OPPORTUNITY	BENEFITTING RESOURCES	PROJECT-LEVEL CONSIDERATIONS	PRIORITY RATING
<p>22- Sub alpine conifer and true fir habitats have become over-dense and decadent over time as a result of fire suppression. The lack of fire has resulted in conditions that contribute to the susceptibility of the area to attacks by insects and disease and to catastrophic loss from wildfire.</p>	<p>22- Habitat for great gray owls, marten and wolverine is promoted through development and protection of suitable habitats. Mature forest conditions are maintained on 50% of the true fir habitat type. Fuels and stand densities are reduced or maintained at sustainable levels.</p>	<p>22a- In mature forest stands, reduce ground fuels and ladder fuels where they contribute to risk of large-scale disturbance events. Use prescribed fire to reduce fuels, use hand-piling or mechanical treatments prior to burning where fuel loadings are extreme. See Figure 6-5.</p> <p>22b- Protect mid- and early seral forest from loss to large-scale disturbance events. Use thinning to reduce stand densities, use prescribed fire in mid- and early successional 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. See Figure 6-5.</p> <p>22c- Conduct protocol surveys for great gray owls in the analysis area prior to project implementation. Use status information to minimize impacts to owls during project implementation. Coordinate surveys with biologists from adjacent forests and private land.</p> <p>22d- Coordinate with PSW to conduct furbearer surveys using the most recent survey protocol and latest technology. Focus on habitat commonly described for marten, including high elevation true fir stands. Survey information can be used by researchers to more reliably determine the distribution of marten in northern California.</p> <p>22e- Conduct transects for snags and CWD in the matrix and in LSR project areas to determine if baseline conditions exceed Forest Plan S&Gs. Reinitiate transects after project implementation to determine that S&Gs are met post-project.</p>	<p>22- Wildlife, research</p>	<p>22- Coordinate with PSW prior to conducting surveys.</p>	<p>22- Team Rating: HIGH</p> <p>Public Rating: N/A</p>
<p>23- Mixed conifer habitat 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 mature forest habitat within the analysis area.</p>	<p>23- Habitat for NSOs, goshawks, fisher, red tree voles and mollusks is promoted through development and protection of suitable habitats. The amount of suitable mature forest habitat within LSRs is at the maximum amount sustainable through time. Connectivity of mature mixed conifer habitat is provided in the matrix, in 100-acre LSRs and in RRs.</p>	<p>23a- Implement opportunities 19a-19d from above to protect and develop suitable habitat for NSOs, goshawks, fisher, red tree voles, and mollusks in the analysis area.</p> <p>23b- Maintain connectivity of suitable habitats across the landscape by maintaining more than 50% dispersal habitat (trees average >11" DBH, crown closure >40%) within the watershed during project planning as described in 20a above.</p> <p>23c- Maintain or promote late-successional forest characteristics in 100-acre LSRs and RRs to provide connectivity across the landscape (see 20b above).</p> <p>23d- Maintain early and mid-seral stages over 50% of the mixed conifer type in Matrix for early forest dependent species.</p> <p>23e- Conduct protocol surveys for NSOs in the analysis area in order to update the database. Use status information to minimize impacts to owls during project implementation. Coordinate surveys with biologists from adjacent private land and FWS to minimize disturbance to known pairs.</p> <p>23f- Conduct surveys for goshawks in KLRMP designated Goshawk Management Areas (GMAs) to determine status. If GMAs are occupied, manage according to KLRMP direction. If GMAs are not occupied consider removal of GMA from the Forest network. See Figure 6-5.</p>	<p>23- Wildlife, botany, fisheries, fire</p>	<p>23- Conduct NSO surveys according to the NSO Baseline Analysis to determine status prior to habitat manipulation. Coordinate surveys with FWS and private landowners.</p>	<p>23- Team Rating: LOW</p> <p>Public Rating: N/A</p>

Table 6-6 ISSUE - Terrestrial Wildlife and Plants

EXISTING SITUATION	DESIRED CONDITION	MANAGEMENT OPPORTUNITY	BENEFITTING RESOURCES	PROJECT-LEVEL CONSIDERATIONS	PRIORITY RATING
24- Very little is known about red tree voles in the analysis area. Surveys and genetic analysis are needed to determine the distribution of the sub-species.	24- The range of the Oregon red tree vole is well-defined, viable populations occur in suitable habitat, habitat is well connected by corridors in matrix.	24 Coordinate with researchers and FWS in conducting strategic or project level surveys to determine the extent of occurrence for Oregon red tree voles. Utilize newly developed survey protocols.	24- Wildlife	24-- Include genetic testing if that is the only way to determine the difference between sub-species.	24 Team Rating: LOW Public Rating: N/A
25- Montane hardwood, hardwood-conifer, and chaparral habitats have changed over time as a result of fire suppression. Stands have become dense and decadent with accumulations of fuels. Conifer encroachment has reduced the amount of habitat.	25- Habitats are maintained by frequent fire as open and vigorous stands with little woody fuel and an abundance of grass and forbs. Chaparral stands are moderately dense and vigorous with sprouting and regeneration occurring. Montane hardwood-conifer habitat occupies 9-11% of the analysis area, montane hardwood occupies 3-5% of the area, and chaparral habitat occupies 3-5% of the area.	25- Promote healthy, vigorous stands of hardwoods and chaparral for foraging, nesting and cover habitat. Use mechanical or manual thinning techniques, masticators, brush crushing, pruning and prescribed fire to promote sprouting and reproduction and to reduce woody fuels buildup. See Figure 6-5.	25- Wildlife	25— None identified at this time.	25- Team Rating: MED. Public Rating: N/A
26- Montane riparian habitat consists of riparian strips with willow or alder thickets and small patches of willows or alders in higher elevation montane meadows. Positive identifications of willow flycatchers have occurred in the watershed. Very few surveys have been conducted for this species. Western pond turtles, yellow-legged frogs, and Cascades frogs are expected to occur in riparian habitat in the area.	26- Riparian reserves protect aquatic habitats; riparian areas, meadows, and uplands provide foraging, nesting, cover and dispersal habitat and across the landscape.	26a- Promote willow habitat along streams where management activities or flood damage have removed habitat; considering willow planting in project or flooded areas. 26b- Coordinate with researchers and the Partners in Flight Program to conduct surveys for nesting willow flycatchers. Survey information can be used by researchers to more reliably determine the distribution of nesting willow flycatchers in the Klamath Mountains. See Figure 6-5. 26c- Conduct surveys for western pond turtles and native frogs to determine local status and abundance. 26d- Refer to aquatic RR opportunities.	26- Wildlife, fish, watershed	26- Work with Partners in Flight program.	26- Team Rating: LOW Public Rating: N/A
27- Montane meadow habitat has been reduced in the area as a result of fire suppression and subsequent encroachment of brush and conifers. Some meadows are negatively affected by recreation traffic.	27- Montane meadow habitat is maintained by frequent fire. Road density and access by vehicles is limited in the vicinity of meadows. Montane meadow habitat occupies 2-3% of the area.	27a- Use manual thinning techniques and prescribed fire to reduce conifer and brush encroachment and increase forage in montane meadows. See Figure 6-5. 27b- Refer to Appendix E - Roads Analysis Process , for opportunities to close or decommission roads and reduce impacts to meadows.			27- Team Rating: MED.- HIGH Public Rating: HIGH
28- 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.	28- 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.	28a- Survey caves and abandoned mine shafts for potential bat habitat. Develop management plans for occupied sites to minimize disturbance from humans. 28b- 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. 28c- Implement opportunities 19a-19d and 20a-20b from above to protect and	28- Wildlife, humans	28- None identified at this time.	28- Team Rating: LOW Public Rating: N/A

Table 6-6 ISSUE - Terrestrial Wildlife and Plants

EXISTING SITUATION	DESIRED CONDITION	MANAGEMENT OPPORTUNITY	BENEFITTING RESOURCES	PROJECT-LEVEL CONSIDERATIONS	PRIORITY RATING
		develop late-successional forest habitats that are suitable for forest dwelling bat species.			
<p>29- Siskiyou Mountain salamanders occur within the analysis area. Habitat for salamanders, in the form of talus substrates, is scattered throughout</p> <p>29 (cont.) the area.</p>	<p>29- 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 burning, are conducted in the watershed and are consistent with maintaining viability of salamanders and mollusks.</p>	<p>29a- Conduct surveys for salamanders in the watershed, use information to more clearly define the range of the species.</p> <p>29b- Use most recent research information and current management recommendations to maintain adequate forest structure around occupied habitats during project implementation.</p> <p>29c- Work with researchers to gather data concerning salamander responses to prescribed burning. Conduct surveys before and after prescribed fire projects to gain understanding of fire effects to these species.</p>	<p>29- Wildlife, fire, timber</p>	<p>29- Work closely with ROD taxa groups, research and species specialists to develop survey strategies and experimental projects.</p>	<p>29- Team Rating: LOW</p> <p>Public Rating: N/A</p>
<p>30- 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.</p>	<p>30- 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.</p>	<p>30a- Implement opportunities 19a-19d from above to protect and develop late-successional forest habitats that are suitable for cover; focus on maintaining more open stands on south and west aspects where deer may find transitory forage as a result of thinning and frequent underburning.</p> <p>30b- Take advantage of forest management practices in the matrix to increase deer forage opportunities in newly created openings. Work with FS managers and outside sources to strategically locate openings, and propose enhancement projects (e.g. seeding, underburning).</p> <p>30c- Use manual thinning techniques and prescribed fire to reduce conifer encroachment and increase forage in meadows and brush fields. See Figure 6-5.</p> <p>30d- Employ mechanical manipulation techniques and prescribed burning on brush vegetation and oak woodlands for deer winter range and transitory range improvement. See Figure 6-5.</p> <p>30e- Refer to Appendix E - Roads Analysis Process, for opportunities to close or decommission roads and reduce potential disturbance to deer.</p>	<p>30- Wildlife, recreation, humans</p>	<p>30- Work with California Dept. of Fish and Game, local sportsmen groups, California Deer Assoc., and The Mule Deer Foundation to develop habitat improvement projects.</p>	<p>30- Team Rating: LOW</p> <p>Public Rating: HIGH</p>
<p>31- Elk have been reintroduced on the Forest and populations are increasing in 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.</p>	<p>31- 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.</p>	<p>31a- Implement opportunities 19a-19d from above to enhance elk cover habitat.</p> <p>31b- Use manual thinning with wider spacing and masticator or other slash disposal techniques in plantations in elk transitory range to promote forage, emphasis should be on south and west aspects.</p> <p>31c- Implement opportunities 35b-35d from above, with emphasis on foraging habitat in the matrix.</p> <p>31d- Refer to Appendix E - Roads Analysis Process, for opportunities to close or decommission roads and reduce potential disturbance to elk.</p>	<p>31- Wildlife, recreation, humans</p>	<p>31- Work with California Dept. of Fish and Game, local sportsmen groups, and The Rocky Mountain Elk Foundation to develop habitat improvement projects.</p>	<p>31- Team Rating: MED.</p> <p>Public Rating: N/A</p>
<p>32- There are six plant species of concern occurring within the analysis area and two botanical special interest areas (SIAs).</p>	<p>32- Sensitive plant populations are stable and increasing. Suitable habitats for plants are intact and are managed to provide recruitment opportunities. Natural vegetative features of SIA are maintained or enhanced. Education and interpretive information on the ecological value of SIAs is provided.</p>	<p>32a- 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. Monitor for potential impacts from grazing.</p> <p>32b- Evaluate SIAs for potential threats from insects, disease, spread of noxious weeds, wildfire, grazing, and fire suppression. Control threats if necessary to maintain the unique features of the SIA. See Figure 6-5.</p>	<p>32- Botany, wildlife, Range</p>	<p>32- None identified at this time.</p>	<p>32- Team Rating: HIGH</p> <p>Public Rating: N/A</p>

Table 6-6 ISSUE - Terrestrial Wildlife and Plants

EXISTING SITUATION	DESIRED CONDITION	MANAGEMENT OPPORTUNITY	BENEFITTING RESOURCES	PROJECT-LEVEL CONSIDERATIONS	PRIORITY RATING
33- Several introduced species occur within the analysis area and may be a threat to native species. Species, such as bullfrogs and opossums, may be a threat to native wildlife species. Noxious weeds occur in the analysis area and may be a threat to native plant diversity.	33- Introduced, exotic, and noxious species are controlled and do not present a threat to native species or species diversity.	33- Develop strategies to control introduced, exotic or noxious species within the analysis area so that they do not threaten native species or species diversity.	33- Botany, wildlife	33- Work with county, state and private to control spread of noxious weeds.	33- Team Rating: HIGH Public Rating: HIGH

Table 6-7 ISSUE - Roads

EXISTING SITUATION	DESIRED CONDITION	MANAGEMENT OPPORTUNITY	BENEFITTING RESOURCES	PROJECT-LEVEL CONSIDERATIONS	PRIORITY RATING
34- High road mileage, high road densities, and decreasing maintenance budgets have reduced road maintenance to inadequate levels.	34- A stable road system that meets rural access, community/ public access, resource protection, and administrative needs and minimizes sediment delivery to stream channels, and reduces recurring maintenance costs.	34a- Use <i>Roads Analysis Process</i> to prioritize road maintenance to facilitate access needs and resource protection. 34b- Utilize list in Appendix E - Roads Analysis Process , as well as additional site-specific information to develop opportunities for road improvements, including culvert upgrades, outcropping, surfacing, reinforcing fills, etc. See Figure 6-6. 34c- Utilize list in Appendix E - Roads Analysis Process , as well as additional site-specific information to develop proposed actions for environmental analysis that lead to decisions on decommissioning and long term storage of roads. See Figure 6-6. 34d- Work with the County to develop a maintenance agreement for the 46N50 Road beyond milepost 3.0.	34- Hillslope Processes, Aquatic Species, Terrestrial Wildlife, Human Uses	34- Work closely with County representatives and local community members during project development. Maintain emergency alternative access routes (Mill Creek)	34- Team Rating: HIGH Public Rating: HIGH
35- Most of the roads in the analysis area were constructed when a 20 year flood standard was used in road and culvert design. These culverts do not meet current agency policy for 100 year design standards .	35- Roads are designed, constructed, or improved to minimize resource effects and meet ACS objectives.	35a- Field verify the size of stream crossings, identify those sites that have highest risk of causing resource damage, and use this information to set priorities and upgrade as opportunities arise. 35b- Utilize Road Sediment Source Inventory & Risk Assessment to set priorities to upgrade. 35c- Cooperate/coordinate with private landowners and Siskiyou County on recommended <i>Road Sediment Source Inventory and Risk Assessments</i> on roads that cross private lands, or those under County jurisdiction and maintenance.	35- Aquatic species and human uses.	35- None identified at this time.	35- Team Rating: HIGH Public Rating: N/A

Table 6-8 ISSUE - Human Uses

EXISTING SITUATION	DESIRED CONDITION	MANAGEMENT OPPORTUNITY	BENEFITTING RESOURCES	PROJECT-LEVEL CONSIDERATIONS	PRIORITY RATING
36- The <i>Forest Plan</i> identified the Condrey Mountain Blueschist Geologic Special Interest Area (SIA), comprising 500 acres, and the Horse Creek Old Growth Forest Botanical Area, comprising 200 acres. These SIAs have not been formally established and management plans have not been developed. SIA goals are to manage for ecological processes and the unique features for which the area was designated, and to promote education, interpretation, public use and enjoyment of the area, while not harming the special values of the area.	36- Protect and enhance the vegetative, natural and geological features and processes of the area. Provide educational and interpretative information about the area. Few signs of management activities are present, other than to provide public access and accommodation as needed.	36- Formally establish the two SIAs, and develop management plans for the areas through environmental analysis. Develop and provide educational and interpretative materials on the areas. See Figure 6-7.	36- Resources, Recreation, and a wide range of publics.	36- Work closely with geologic and botanical resource specialists and local educational and community groups.	36- Team Rating: LOW Public Rating: N/A
37- Ultramafic bedrock is found in most of the sub-watersheds of the analysis area. It is most abundant in Blue Heron, Collins-Lime, Doggett and Quigley sub-watersheds. Asbestos hazards associated with roads, trails, aggregate surfacing or rock pits in these areas have not been assessed. There is increased public concern about naturally occurring asbestos, and new regulations pertaining to aggregate surfacing, quarry operations, and construction activities in ultramafic and asbestos-bearing rocks.	37- Compliance with existing California regulations pertaining to naturally occurring asbestos. Effectively manage rock resources on the forest. Provide for public health and safety by using Best Management practices for dust abatement.	37- Inventory existing rock pits in ultramafic rocks and test for asbestos. Inventory and test for asbestos on roads surfaced with ultramafic aggregate. Consider and develop hazard mitigation measures such as road closure, resurfacing with non-asbestos bearing aggregate and dust abatement methods on roads and at rock pit sites to minimize public exposures and comply with new regulations. Coordinate as necessary with the Siskiyou County Air Pollution District.	37- Engineering, Resources, Public Health & Safety	37- None identified at this time.	37- Team Rating: MED. Public Rating: N/A
38- The watershed offers a range of the recreation opportunity spectrum (ROS) primarily associated with dispersed recreation.	38- A range of opportunities are offered within the watershed including, semi-primitive non motorized and motorized; and roaded natural.	38a- Offer semiprimitive nonmotorized recreation opportunities when possible in the Late Successional Reserves in Horse Creek and the Condrey Mt. Released Roadless Area by expanding the existing trail system. 38b- Consider decommissioned or closed roads for trails and ORV use if compatible with other resource concerns. 38c- Consider appropriate roads for mountain bike routes. 38d- Consider additional river accesses where feasible and needed to enhance the public river recreation opportunities and adequately post National Forest boundaries in the river corridor. 38e- Continue to offer motorized recreation opportunities by managing an extensive transportation network. 38f- Improve road, trail, feature signing for dispersed recreation opportunities. 38g- Maintain the Pacific Crest Trail corridor to appropriate visual quality.	38- Recreation	38- Install new signs and maintain existing signs to facilitate travel within the area, inform visitors and protect resources.	38- Team Rating: MED. Public Rating: N/A
39- Currently some areas do not meet	39- Previously disturbed areas	39- Develop and implement management strategies for areas of concentrated	39- Recreation, the	39- Develop priorities	39- Team

Table 6-8 ISSUE - Human Uses

EXISTING SITUATION	DESIRED CONDITION	MANAGEMENT OPPORTUNITY	BENEFITTING RESOURCES	PROJECT-LEVEL CONSIDERATIONS	PRIORITY RATING
Visual Quality Objectives (VQOs) due to past management activities that were done prior to development of these objectives.	meet VQOs.	use to rehabilitate landscapes not meeting desired VQOs. Design new projects to meet VQOs. See Figure 6-7.	local community, & timber.	consistent with land allocation goals.	Rating: MED. Public Rating: N/A
40- There is a limited maintained trail system in the watershed and some trails don't meet the design standard for the intended users.	40- The trail system, including trailheads, meets recreation management objectives and user needs. It ensures safety and meets resource protection needs. Trails will provide a variety of recreational experiences	40a- Reconstruct and maintain system trails to meet the intended users needs. 40b- Reconstruct portions of the Johnson's Dairy and Horse Creek Trails, and establish trailheads. See Figure 6-7. 40c- Improve the PCT Trailhead near Reeves Ranch Springs and reconstruct and maintain the PCT to an equestrian level. See Figure 6-7.	40- Recreation	40-	40- Team Rating: MED. Public Rating: N/A
41- Facilities and settings at some developed sites do not meet agency standards. All of the developed sites need some reconstruction to meet accessibility standards. Some sites can be improved to enhance the recreation experience by adding new features.	41- Recreation sites and facilities meet user expectations and users' needs, they are safe, sanitary, and accessible and enhance the recreation experience.	41a- Reconstruct Blue Heron and Brown Bear River Accesses. See Figure 6-7. 41b – Construct a toilet at Brown Bear Picnic Area. See Figure 6-7. 41c - Meet the accessibility requirements of the Forest Accessibility Action Plan at each developed site.	41- Recreation	41-	41- Team Rating: MED. Public Rating: HIGH
42- A variety of special forest products such as poles, boughs, and Christmas trees are collected in the analysis area.	42- Local needs/uses are met.	42- 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.	42- Local community.	42- Involve interested local community members.	42- Team Rating: MED. Public Rating: HIGH
43- Readily accessible and available firewood is in short supply.	43- A regular supply of available firewood cutting opportunities is provided.	43- Establish firewood cutting areas along open roads where firewood cutting can be used as a tool to accomplish forest management (examples hazard tree removal, thinning).	43- Local community.	43- Focus on areas with high densities of hardwoods. Look at opportunities in the Collins LSR. Issue commercial permits on downhill side of road.	43- Team Rating: HIGH Public Rating: HIGH
44 - Both cytospora and dwarf mistletoe are causing significant mortality in True Fir stands. The stands are falling apart and in need of silvicultural treatment in 44. (cont.) order to deal with the current disease problem. Also high fuel loadings created by the mortality need to be reduced.	44- Stands on Matrix lands are vigorous and healthy with disease and mistletoe infection minimized.	44- Apply silvicultural treatments on Matrix lands to deal with the current disease problem with the True Fir zone stands. See Figure 6-7.	44 –Insect & disease suppression/ prevention; Fuel Reduction	44- None identified at this time.	44- Team Rating: HIGH Public Rating: HIGH

Table 6-8 ISSUE - Human Uses

EXISTING SITUATION	DESIRED CONDITION	MANAGEMENT OPPORTUNITY	BENEFITTING RESOURCES	PROJECT-LEVEL CONSIDERATIONS	PRIORITY RATING
45- Some timber stands are above normal stocking levels, in particular the Ponderosa Pine/ Mixed Conifer and the Douglas Fir/mixed conifer. Stands are creating high risk fuel hazard and increased risk to insect problems.	45- Stocking at a level so that substantial mortality does not occur; maintain healthy vigorous stands. Fuels conditions are at acceptable levels and disease risk is minimized.	45- Reduce stocking to levels that are commensurate with healthy conditions. See Figure 6-8.	45-	45- None identified at this time.	45- Team Rating: MED. Public Rating: HIGH
46- Twenty 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. a- Older plantations(pre 1970) and trees planted in the Buckhorn Burn will need a commercial thinning in the next 5-10 years.	46- Plantations are managed to maximize growth and are resilient to fire effects.	46- Use thinning or burning treatments to develop stands that are resilient to fire. See Figure 6-8.	46- Timber.	46- None identified at this time.	46- Team Rating: HIGH Public Rating: N/A
47- The <i>Forest Plan</i> originally identified 13,030 acres of matrix land in the analysis area that are intended to provide sustainable timber outputs. This analysis has identified <> acres as being realistically available in the next 10 years.	47- A seral -stage distribution that sustains a long-term, even flow of timber commodities commensurate with site capabilities and administrative constraints. Timber outputs will also contribute to community stability.	47- Develop and implement an environmentally sustainable timber program based on site potential seral-stage distribution, management objectives, and prescriptions as modeled in the Forest Plan. See Figure 6-8.	47- Timber & Local community.	47- Timber sales are planned and administered to meet ACS objectives.	47- Team Rating: MED. Public Rating: N/A
48- Hazard trees are creating a Public safety hazard along the road system within the watershed.	48- Public safety needs are met by reducing potential hazards along road systems.	48- Remove roadside hazard trees as opportunities present themselves.	48- Roads/ Safety	48- None identified at this time.	48- Team Rating: HIGH Public Rating: HIGH