

# APPENDIX D

## KEY RECOMMENDATIONS

[page #] indicates where the recommendation is referred to in the main Forest Roads Analysis document.

### STRATEGIC PLANNING

- Use the key road system as a basis for making site-specific road management decisions. If needed, adjust the system to meet changing needs and conditions over time. [p.12]
- Identify road systems that provide access to mineral patent in-holdings (private land ownership) and key designated Forest administered material sources. [p.31]
- Utilize the Forest Rock Resource Layer in the Forest Geographic Information System (GIS) (layer presently under construction) to identify Forest designated material sources. [p.31]
- Query the Bureau of Land Management's nationally centralized LR2000 Reporting Database to identify the general location (legal description) of registered active and close file unpatented mining claims. The Bureau of Land Management State Office (Mining Claim Recordation Section) can provide more detailed descriptions and site maps for specific mining claims based on the lead file number listed in LR2000. The location of patented mining claims can be referenced from Master Title (MT) Use Plats. Access must be maintained to these claim sites. [p.31]
- Reference FSM 7732.03 and 7732.22 for road maintenance policy direction applicable to locatable, leasable, and salable minerals. Provide access where required. [p.31]
- Maintain linkages to State Highways 138 and 227, County Roads 1, and Brice Creek, Row River, Little River, County Road 17A, Tiller-South Umpqua Highway (Rd 2800), Upper Cow Creek (Rd 3600), and Sharps Creek (Rd 2460) roads. [p.25 & 26]
- At the District or appropriate scale, consider whether the key Forest roads meet current public access needs. If such needs are not addressed by the current key road system, adjust or modify the key road system while protecting forest resources. [throughout document]
- Develop annual road maintenance plans based on road management objectives, expected traffic, available funding, and Forest priorities. [p.13]
- Integrate the Forest restoration program with the Engineering program to ensure the Forest restoration strategy is understood and implemented for all road related activities. [p.15]
- Continue to implement the 2000 "Umpqua National Forest Watershed Restoration Business Plan" as revised (2003), within available funding constraints. Continue to follow the priorities from this plan in planning and accomplishing road related watershed restoration work. [p.15]

**STRATEGIC PLANNING (CONTINUED)**

- Identify and map in the Forest Geographic Information System (GIS) key cooperative data sites, utilities, and special use sites and maintain road access to these areas. [p.18]
- Reference FSM 7732.22, 7732.23, 7732.24, and 7732.25 for road maintenance policy direction applicable to access for cooperators and special use sites. [p.18]
- Implement the transportation requirement of the SA and TMP for the North Umpqua Hydroelectric Project. [p.19]
- Identify and map in the Forest Geographic Information System (GIS) private land and maintain access to these areas. [p.19]
- Identify and resolve right-of-way and easement issues. [p.19]
- At the watershed or project scale, consider whether the key (Primary and Secondary Roads) Forest Roads meet current public access needs. If such needs are not addressed by the current key road system, adjust or modify the key road system. [p.24]
- Continue work with other partners in the implementation of the Rogue Umpqua National Scenic Byway Corridor Management Plan, and Byway Enhancement Projects. [p.28]
- Develop corridor management plans for the Historical Myrtle Creek – Canyonville Tour Route and Diamond Drive. [p.28]
- Continue with planning and preliminary design work for the West Cascades Scenic Byway Extension FSPR project. [p.28]
- Identify other potential FSPR projects. [p.28]
- Scenic Routes located on National Forest System roads, and potential FSPR should be given the highest Forest priority for road maintenance as they have the highest traffic volumes on the Forest and drivers that are the least familiar with driving on forest roads. [p.28]
- Where appropriate, during project or watershed scale road analysis evaluate local National Forest roads within flood plains for relocation or decommissioning. Work with the county governments and willing landowners to provide other access. [p.37]
- Continue the prohibition of operation of ATVs (All Terrain Vehicles) and other vehicles on seasonally closed (December 1<sup>st</sup> through April 30<sup>th</sup>) or decommissioned roads in Winter Range (reference District Access and Travel Management maps, Appendix C: Road Management Information, and 1990 Umpqua NF LRMP, Appendix F). [p.42]
- For timber sale purchaser road maintenance and decommissioning, use contract provisions for equipment cleaning such as WO-C/CT 6.36, Appendix 1. [p.44]
- For road maintenance and decommissioning conducted as part of public works (construction and reconstruction) contracts and service contracts, include contract language for equipment cleaning such as in WO-C/CT 6.36, Appendix 1. [p.44]
- Provide for revegetation of disturbed sites using native species (reference Umpqua native seed policy). [p.44]

## SITE-SPECIFIC PLANNING

- Prioritize road maintenance work to ensure resource protection and user safety within current Forest budgets. Balance long-term road maintenance costs with short-term investments to prevent road and resource damage. [p.12 & 13]
- Identify and map in the Forest Geographic Information System (GIS) key water sources, cooperative data sites, utilities, and special use sites and maintain road access to these areas. [p.18]
- Since access routes to most developed recreation sites on the Forest have an “encourage” road management strategy, a high priority should be placed on the maintenance of these routes; this includes sign maintenance. [p.24]
- All open Forest system roads should be maintained, including clearing vegetation and hazard trees, to make use safe for all forest users. Unsafe roads need to be analyzed and either brought into a safe condition or closed. [p.32]
- Whenever road reconstruction and new road construction activities are planned, document whether water quality standards are met downslope and downstream. Plan measures to protect and improve water quality, document those measures, and make a finding that water quality standards will be met per the Umpqua Forest Standards and Guidelines. Follow existing water quality management plans. [p.35]
- Provide fish and amphibian passage at the top 5 culverts recommended in the 2001 Umpqua culvert inventory (Williams Creek, Cedar Creek MP 2.6 and 3.1, Emerson Creek, and Pinnacle Creek). [p.37]
  - Consult the Umpqua Fish Passage at Road Crossings Report FY 00-01.doc filed at J:\fsfiles\office\nat\_res\water\7700roads\culvert\_inventory\2001\report\
- Incorporate the findings of the Umpqua Fish Passage at Road Crossings Report FY 00-01 into the recommended projects in the Umpqua National Forest Restoration Business Plan, 2003 Update. [p.37]
- Identify road systems that are at highest risk for landslides. If they are part of the future Forest road network (infrastructure) stabilize them; if not, consider them for temporary closure (storage/Level 1 closure) or for decommissioning. [p.39]
- Utilize the SHALSTABco (version) digital terrain model to identify problem areas for road maintenance and that put resources at risk. This model delineates chronically unstable and high potential instability sites for the occurrence of shallow rapid landslides in a steep dissected terrain (**See Appendix F: Aquatic Information**). [p.39]
- Utilize geomorphic landform maps contained in watershed analyses to delineate areas of earth flow terrain that are high cost road maintenance areas and put resources at risk. [p.39]
- Model in GIS the stream channel gradients and tributary junction angles can be modeled in GIS to determine what reaches of a stream are susceptible to channelized debris flows. This model can delineate scour, transport, and depositional reaches within a stream channels at risk to debris flow occurrence. [p.39]
- Utilize available road stream crossing (culvert) inventories to determine the potential for site failure (via washout or diversion) and sediment delivery to aquatic habitat. Site failure potential represents the integration of hydraulic risk (culvert hydraulic capacity integrated with plugging potential) with consequences (volume of sediment predicted to be delivered into aquatic habitat should site failure occur). [p.39]

**SITE-SPECIFIC PLANNING (CONTINUED)**

- Close or restrict access to roads used only intermittently for forest management activities. [p.32]
- Evaluate unneeded roads for decommissioning or closure (Level 1 maintenance). [p.36]
- Analyze situations where Forest roads are built across stream channels. Determine whether fills should be removed from stream crossings when implementing decommissioning; balance cost with benefits of doing this action. [p.37]
- Maintain access to current or planned (in the near future) vegetation management projects. [p.32]
- Identify, maintain, and GIS map key access points to accommodate equipment needed for vegetation management treatments. [p.32]
- Treat noxious weeds in road decommissioning, restoration, and reclamation projects before roads are made impassable. Re-inspect and follow-up based on initial inspection and documentation.
  - Require equipment cleaning for:
    - ✓ All heavy equipment brought onto the Forest;
    - ✓ All heavy equipment moved from noxious weed infested areas to uninfested areas; and
    - ✓ All vehicles driving off road.
  - Heavy equipment and off-road vehicle cleaning should apply to all contract, force account, cooperator, and special use equipment, and would apply to tractors, mowers, graders, and other equipment, including vehicles and ATVs that have been used off the road surface. [p.44]
- Maintain existing canopy cover to the extent possible when designing new roads or marking clearing limits for temporary roads. [p.44]
- Roads determined to be key Forest routes should be maintained at a high level for quick response of emergency vehicles of all sizes and visibility for safe travel. [p.29]
- Identify and GIS map key water sources, dead-end roads, and roads needed for adequate protection in the wildland/urban interface areas. Maintain road access to these areas. [p.30]
- Consult with suppression cooperators when determining which roads to close or decommission. [p.29]
- For Firefighter Safety: Roads accessible by fire equipment should be accurately mapped and signed. Identify dead-end roads and map potential hazards to firefighters and provide this information to firefighters to support effective suppression/pre-suppression strategies and avoid potential entrapment. [p.30]
- This information should also reside in the Forest Geographic Information System (GIS) for use at the appropriate scale based on fire size and location. [p.30]
- Consider the effect of roads on illegal fishing, poaching and theft. Weigh resource costs against road access benefits. Utilize the LEIMARS data base tool to help with this analysis. [p.34]

## SITE-SPECIFIC PLANNING (CONTINUED)

- Investigate water rights necessary to use water for all road activities. Hydrologists and the Oregon Department of Water Resources Watermaster can help determine if water is available for a proposed use. [p.35]
- Protect stream habitat by disconnecting roads from streams. [p.36]
- Update Umpqua commercial road rules to restrict timber haul on sensitive roads to the dry season. If timber haul must take place during the wet season (see Umpqua NF 1980 LRMP for definition of wet season), monitor rainfall, and reduce or curtail timber haul during periods of prolonged or intense rainfall. [p.40]
- Assess the risk of noxious weed introduction or spread as part of the NEPA process for all proposed activities. [p.43]
- Minimize roadside sources of weed seed that could be transported to other areas. [p.43]

## ROAD CONSTRUCTION AND MAINTENANCE

- Consider alternative funding sources for road maintenance and repair. Examples may include:
  - ✓ Cooperative agency funding and grants for improvements to the key road system resulting in improvements to fish and aquatic habitat.
  - ✓ Partnerships and agreements with other road management agencies, local private landowners, and commercial road user groups.
  - ✓ Special Use and Road Use Permits for the maintenance of project roads during periods of use by non-Forest Service users. Permits identify maintenance to be performed by permittees commensurate with use.
  - ✓ Secure “Rural Schools and Communities Self-Determination Act of 2000” PAYCO funds.

[p.13]

- Implement a Safety Management System on passenger car roads, as per FSM 7733.2. [p.33]
- Increase bridge safety inspections so that by the end of 2004 all bridge inspections have been complete according to the requirements of the NBIS (FSM 7736). [p.33]
- Waterbar roads to allow water from the ditch line to travel across the road surface to the slope below. [p.36]
- Disconnect roads from stream channels by adding waterbars, culverts, rolling dips or cross-drains. [p.36]
- Leave ditch lines vegetated as often as possible. Vegetation acts as a filter that reduces the amount of fine sediment that reaches a stream crossing, however, vegetation will also reduce the hydrologic effectiveness of the ditch, possibly requiring a larger ditch design. [p.40]
- Provide an adequate covering of surface aggregate (rock) on road systems in areas of highly erosive soils (See Appendix F: Aquatics Information, Map F-1). [p.40]

**ROAD CONSTRUCTION AND MAINTENANCE (CONTINUED)**

- Install and maintain water bars or drain dips on roads not intended for passenger cars. [p.40]
- Minimize the effect of noise from road maintenance, reconstruction or decommissioning by managing the seasonal and hourly operating periods of these activities. [p.42]
- When closed roads are reopened, use minimal impact techniques. [p.42]
  - For example:
    - ✓ Keep clearing width to a minimum.
    - ✓ Avoid sidecasting clearing debris and rootwads.
- Use only certified weed-free seed for roadside revegetation. Seed purchased should be tested using the All States Noxious Weed List. [p.44]
- Consider development of a quarry certification program and use only weed-free rock sources for road construction and maintenance. [p.44]
- Close Forest roads not needed for the foreseeable future. Blocked roads and roads that are storm-proofed and allowed to grow-in are at a much lower risk for weed invasion and transport than maintained roads. [p.44]
- Install and maintain water bars or drain dips on local roads not intended for passenger cars. [p.40]
- Schedule and coordinate blading or pulling of noxious weed-infested roadsides or ditches in consultation with local weed specialist. Do not blade or pull roadsides and ditches that are infested with noxious weeds unless doing so is required for public safety or protection of the roadway. If the ditch must be pulled, ensure the weeds remain on-site. Blade from least infested to most infested areas. When it is necessary to blade noxious weed-infested roadsides or ditches, schedule activity when seeds or propagules are least likely to be viable and to be spread. Minimize soil surface disturbance and contain bladed material on the infested site. [p.44]
- Avoid acquiring water for dust abatement where access to the water is through weed-infested sites. [p.44]

## INVENTORY & MONITORING

- Inventory annual and deferred maintenance needs of the key road system. Inventory ¼ of roads maintained for public travel each year. Track site-specific accomplishments and needs as well as watershed analyses recommendations for roads in a database available to Forest Restoration decision-makers. [p.12]
- Plan for high intensity storm patrols within fire perimeters during the next five years. [p.16]
- Utilize the Watershed Erosion Prediction Project (WEPP) method of analysis to model sediment migration from hill slopes and roads to stream corridors (Appendix A: Roads Analysis Process, Step 4 and Key Questions, AQ(2)). [p.40]
- Utilize available road stream crossing (culvert) inventories. Explore opportunities to learn about specific fish runs in areas with high road densities. Consider partnerships with other agencies and stakeholders for more efficient and cost-effective analysis. [p.40]
- Conduct road stream crossing inventories using protocols in Appendix H: Inventories and Assessment Protocols. [p.40]
- Periodically inspect system roads and rights-of-way for invasion or noxious weeds. Train road maintenance staff to recognize weeds and report locations to the local weed specialist. Inventory weed infestations and schedule them for treatment. [p.44]

## OTHER

- As budget shortfalls limit maintenance of the Primary and Secondary Roads from being accomplished to standard, use site-specific maintenance as problems arise. To resolve or mitigate critical safety hazards, use road condition surveys and hazardous evaluations to identify the highest hazard sites on Primary Roads. Mitigate safety hazards by using techniques such as brushing out the hazardous areas, spot rocking, or by signing, or in some situations, closing roads until critical maintenance can be accomplished to mitigate risks to public safety. [p.33]
- Actively explore partnership and PAYCO funding opportunities to accomplish restoration objectives. [p.15]
- Update priorities for fire restoration road work as additional funding may become available. [p.16]