
Appendix C
Standard Management Requirements
And Monitoring

Wildlife and Fisheries

The Standard Management Requirements (SMRs) are contained in the *Biological Assessment / Biological Evaluation for the Moonlight Project*. This report is part of the Diamond Project Record on file at the Mt. Hough Ranger District; a copy is available upon request.

Bald eagle:

1) A Limited Operating Period (LOP) should be implemented not allowing the cutting of any hazard/dead trees within Antelope III territory between January 1 and August 15 along road 28N03 and the first half mile of road 27N42.

2) No log haul is to occur on the northern portion of 27N42 to the intersection of 28N03 during this LOP. This affects essentially a ½ mile of road. This LOP forces haul south down 27N42 to Babcock Crossing.

3) No log haul is to occur on road 26N54 north through the Stream Fire to 28N03 during this LOP to protect the Antelope I nest site.

4) There is an existing well developed helicopter landing within the primary nesting zone for Antelope III nesting territory (located in Stream Fire and used for Boulder Fire rehab work). Helicopter use of this landing is problematic during the eagle nesting period as helicopter approach and take-off would be line of sight with both nest sites (Antelope I and III) and could provide a disturbance element that the birds are not used to. A LOP is required to eliminate and dissuade helicopter use of this landing during the nesting season (January 1 and August 15). Before the LOP could be lifted, both nest sites would have to be declared non-nesting, which could be determined by May 1.

California Spotted Owl: Based on spotted owl survey information, implementation of dead tree removal could be subject to a Limited Operating Period (LOP) that would restrict tree removal during the nesting season (March 1 to August 15).

Hydrology and Soils

The Standard Management Requirements (SMRs) are displayed in the Watershed Report for the Moonlight and Wheeler Fires Recovery and Restoration Project.” This report is part of the Moonlight and Wheeler Fires Recovery and Restoration Project Record on file at the Mount Hough Ranger District; a copy is available upon request.

Water quality will be protected through the use of Best Management Practices (BMPs) (USDA Forest Service 2000). BMPs are the primary method employed by the Forest Service and the State of California to prevent water quality degradation and to meet California State Water Quality objectives relating to nonpoint sources of pollution. BMPs were incorporated in the design of the action alternatives and are listed under the regulatory framework (see Table C-1).

Table C-1 Best Management Practices.

Resource Concern	Standard Management Requirements	Responsible Person(s)	Timeframe				
Implement Best Management Practices (BMPs):							
Timber Management Practices							
Soils/Fish/ Hydrology / Wildlife	1.1	Planning Process	Prep Officer and Timber Sale Administrator (TSA)	Prior and During Treatment			
	1.2	Timber Harvest Area Design					
	1.3	Use of Erosion Hazard Rating (EHR) for Timber Harvest Area					
	1.4	Use of Sale Area Maps for Designating Water Quality Protection Needs					
	1.5	Limiting the Operating Period of Timber Sale Activities					
	1.6	Protection of Unstable Lands					
	1.8	Streamside Management Zone Designation					
	1.9	Determining Tractor Loggable Ground					
	1.10	Tractor Skidding Design					
	1.12	Log Landing Location					
	1.13	Erosion Prevention and Control Measures During Timber Sale Operations					
	1.14	Special Erosion Prevention Measures On disturbed Land					
	1.15	Re-vegetation of Areas Disturbed by Harvest					
	1.16	Log Landing Erosion Prevention and Control					
	1.17	Erosion Control on Skid Trails					
	1.18	Meadow Protection During Timber Harvesting					
	1.19	Streamcourse Protection					
	1.20	Erosion Control Structure Maintenance					
	1.21	Acceptance of Timber Sale Erosion Control Measures Before Sale Closure					
	1.22	Slash Treatment in Sensitive Areas					
	1.23	Five-Year Reforestation Requirement					
	1.25	Modification of the Timber Sale Contract					
	Road and Building Site Construction Practices						
		2.1			General Guidelines for the Location And Design Of Roads		
		2.2			Erosion Control Plan		
	2.3	Timing of Construction Activities					
	2.4	Stabilization of Road Slope Surfaces and Spoil Disposal Areas					
	2.5	Road Slope Stabilization					
	2.6	Dispersion of Subsurface Drainage from Cut and Fill Slopes					
	2.7	Control of Road Drainage					
	2.9	Timely Erosion Control Measures on Incomplete Roads and Streamcourses					
	2.11	Control of Sidecast Material					
	2.12	Servicing and Refueling of Equipment (similar to BMP 7.4 – Oil and Hazardous Substance Spill Contingency Plan and Spill Prevention Control and Countermeasure [SPCC] Plan)					
	2.13	Control of Construction in Streamside Management Zones (the Riparian Habitat Conservation Areas [RHCA's])					
	2.14	Controlling In-channel Excavation					
	2.15	Diversion of Flows Around Construction Sites					
	2.16	Streamcourses on Temporary Roads					
	2.22	Maintenance of Roads					
	2.23	Road Surface Treatment to Prevent Loss of Materials					
	2.24	Traffic Control During Wet Periods					
	2.26	Obliteration or Decommissioning of Roads					

Resource Concern	Standard Management Requirements	Responsible Person(s)	Timeframe
Vegetation Manipulation Practices			
	5.2 Slope Limitations for Mechanical Equipment Operations		
	5.3 Tractor Operation Limitation in Wetlands and Meadows		
	5.6 Soil Moisture for Mechanical Equipment Operations		
Watershed Management Practices			
	7.3 Protection of Wetlands		
	7.4 Oil and Hazardous Substance Spill Contingency Plan and Spill Prevention Control and Countermeasure (SPCC) Plan		
	7.8 Cumulative Off-site Watershed Effects		

Site-specific measures that relate directly to these BMPs would be used on the Moonlight and Wheeler Fires Recovery and Restoration Project to minimize erosion and resultant sedimentation. The BMPs would also be used to minimize negative changes in other water quality parameters such as dissolved oxygen, water temperature, and turbidity. These measures follow the Scientific Analysis Team guidelines for areas adjacent to stream courses, lakes and wetland areas, and streamside guidelines presented in the *Plumas National Forest Land and Resource Management Plan*. Protection and improvement measures would include minimizing disturbance of riparian zones, retention of snags for wildlife, stream shading, recruitment of large organic debris in stream channels, maintenance of side slope and stream channel stability, and prevention of an over accumulation of activity-generated organic debris in stream channels. Timber sale contracts contain many standard provisions that help ensure protection of soil and water resources. These include provisions for an erosion control plan, road maintenance, and skid trail spacing. The following measures, which were incorporated in the design of the action alternatives, would further reduce the risk of cumulative and local impacts on water quality and channel stability.

Soil protection measures are described below. Incorporate the following practices into the project design:

Unless otherwise agreed to by the physical scientist and sale administrator, landings, skid trail approaches to landings (to a distance of 200 feet), and new temporary roads would be subsoiled through the full depth of compaction to restore soil porosity. The subsoiler would be lifted where substantial root and bole damage to larger trees would occur from subsoiling. Skids with slopes greater than 20 percent will not be subsoiled but would be frequently waterbarred. Subsoiling would not occur on shallow soils where the displacement of rocks disrupts soil horizons or where there are concerns about the spread of root disease, or damage to tree roots. Block vehicle access to temporary roads and install water-bars prior to subsoiling operations.

- Ground-based equipment would be restricted to slopes less than 35 percent except on decomposed granitic soils where equipment would be restricted to slopes less than 25 percent.
- Subsoiling to 18 inches minimum depth of temporary roads and landings within same year as harvest.
- Space trails at no less than 50 feet. Though larger spacing is typically recommended, the 50 foot spacing may actually reduce off trail harvest traffic.

Implement the following winter or unseasonably wet weather standards in all units:

- Operations may occur when soil is dry; that is, soil moisture in the upper 8 inches is not sufficient to allow a soil sample to be squeezed and hold its shape, or will crumble when the hand is tapped.
- Winter operations may occur only when the ground is frozen to a depth of 5 inches or over 8 inches of packed snow

Riparian Habitat Conservation Areas (RHCA)

1. Management activities in RHCAs must contribute to improving or maintaining watershed and aquatic habitat conditions described in the Riparian Management Objectives (RMOs).
2. Implement equipment restriction zones and burn pile restriction zones in RHCAs, according to the following table:

Table C-2. Equipment restriction zones and burn pile restriction zones in RHCAs.

Stream Type	Equipment Restrictions by Slope Class			Burn Pile Restrictions by Slope Class ^a	
	0–15%	15–25%	>25%	0–15%	>15%
Perennial, fish bearing	100 feet ^a	150 feet	No mechanical treatment	25 feet	40 feet
Perennial, no fish	50 feet	100 feet	No mechanical treatment	25 feet	40 feet
Intermittent	25 feet	50 feet	No mechanical treatment	15 feet	25 feet
Ephemeral	25 feet	50 feet	No mechanical treatment	15 feet	15 feet

Note:

a. Distances shown would apply to each side of the stream channel and are based on stream type and slope steepness. Where feasible, burn piles would not be placed any closer to streams than the distances shown

Botanical Resources and Noxious Weeds

The following SMRs were developed in accordance with the direction provided in table 2.4 of the Herger-Feinstein Quincy Library Group (HFQLG) final environmental impact statement (EIS) to reduce the introduction and spread of noxious weeds on National Forest System lands. These SMRs are also displayed in the *Noxious Weed Risk Assessment for the Diamond Vegetation Management Project*. This report is part of the Diamond Project Record on file at the Mt. Hough Ranger District—a copy is available upon request.

Cleaning off-road equipment. Require all off-road equipment and vehicles (Forest Service and contracted) used for project implementation to be free of weeds. Clean all equipment and vehicles of all mud, dirt, and plant parts. This will be done at a vehicle washing station or steam-cleaning facility before the equipment and vehicles enter the project area. Cleaning is not required for vehicles that will stay on the roadway. In addition, all off-road equipment must be cleaned prior to leaving areas infested with noxious weeds.

Road construction, reconstruction, and maintenance. All earth-moving equipment, gravel, fill, or other materials need to be weed free. Use onsite sand, gravel, rock, or organic matter where possible.

Revegetation. Use weed-free equipment, mulches, and seed sources. Avoid seeding in areas where revegetation will occur naturally, unless noxious weeds are a concern. Save topsoil from disturbance and put it back to use in onsite revegetation, unless contaminated with noxious weeds. All activities that require seeding or planting will need to use only locally collected native seed sources. Plant and seed material should be collected from as close to the project area as possible, from within the same watershed, and at a similar elevation whenever possible. Persistent non-native species such as timothy, orchard grass, or ryegrass should be avoided. This will implement the USDA Forest Service Pacific Southwest Region (Region 5) policy that directs the use of native plant material for revegetation and restoration for maintaining “the overall national goal of conserving the

biodiversity, health, productivity, and sustainable use of forest, rangeland, and aquatic ecosystems. Plumas National Forest botanists will develop project, and site-specific revegetation and seeding guidelines will be customized from existing general guidelines as necessary.

Staging areas. Do not stage equipment, materials, or crews in noxious weed-infested areas where there is a risk of spread to areas of low infestation.

Control Areas. Wherever feasible, noxious weed locations will be area designated as Control Areas, where equipment and project activities will be excluded. These areas will be identified on project maps and delineated in the field with day-glow orange noxious weed flagging.

Heritage Resources

These SMRs are displayed in the “Heritage Resource Report for the Moonlight and Wheeler Fires Recovery and Restoration Project.” This report is part of the Moonlight and Wheeler Fires Recovery and Restoration Project Record on file at the Mt. Hough Ranger District—a copy is available upon request.

- A. All proposed activities, facilities, improvements, and disturbances shall avoid heritage resource sites. “Avoidance” means that no activities associated with the project that may affect heritage resource sites shall occur within a site’s boundaries, including any defined buffer zones. Portions of the project may need to be modified, redesigned, or eliminated to properly avoid heritage resource sites.
- B. All heritage resource sites within the area of potential effect shall be clearly delineated prior to implementing any associated activities that have the potential to affect heritage resource sites.
- C. Buffer zones may be established to ensure added protection where the forest or district archaeologist determines that they are necessary. The use of buffer zones in conjunction with other avoidance measures are particularly applicable where setting contributes to the property’s eligibility under 36 CFR 60.4, or where it may be an important attribute of some types of heritage resource sites (e.g., historic buildings or structures; historic or heritage properties important to Native Americans). The size of buffer zones needs to be determined by the forest or district archaeologist on a case-by-case basis.
- D. When any changes in proposed activities are necessary to avoid heritage resource sites (e.g., project modifications), these changes shall be completed prior to initiating any activities.
- E. Monitoring during project implementation, in conjunction with other measures, may be used to enhance the effectiveness of protection measures.
- F. If heritage resources are inadvertently discovered during project implementation, the Mount Hough Ranger District archaeologist will be contacted immediately. The heritage resources will be recorded, clearly delineated, and protected.

Treatment Implementation

Pre-existing skid trails and landings will be used whenever available, feasible, and in a desirable location. In order to avoid loss of land base productivity, no more than 15 percent of timber stands shall be dedicated to landings and permanent skid trails (*Plumas National Forest Land and Resource Management Plan* [“Forest Plan”]). In areas where pre-existing skid trails and landings are not present, construction of such facilities will occur as agreed upon by the Forest Service and purchaser. All landings and skid trails utilized shall conform to the standards and guidelines set forth in the Timber Sale Administration Handbook (FSH 2409.15) and the Forest Plan.

Monitoring

Soils: The Forest Plan sets out objectives and protocol for monitoring of plan standards and guidelines, BMP compliance and effectiveness, and soil productivity parameters. Monitoring is to be completed by forest staff on a per annum basis, either project by project, or a sampling of projects. Sampling should include at least five units each on granite and metasedimentary rock soils for a total of ten units for implementation monitoring. Specific methods would be defined by district watershed personnel.

Heritage Resources: Monitoring during project implementation, in conjunction with other measures, may be used to enhance the effectiveness of protection measures.