

Appendix D - MONITORING

The general objective of the monitoring for this EA is to determine if land management activities are being implemented correctly and if the implementation requirements are effective. The following Monitoring Plans have been prepared for this project. They represent monitoring supplemental to other monitoring conducted by the Forest.

CULTURAL RESOURCES MONITORING PLAN

OBJECTIVE: To protect significant Historical and Paleontological Resources from effects of action alternatives.

ITEM TO MONITOR: Monitor known National Register eligible sites to prevent damage from action alternatives; monitor new road construction/reconstruction for subsurface paleontological and cultural resources.

TYPE OF MONITORING: Implementation and effectiveness.

METHODS/PARAMETERS: Field review by Forest Heritage Staff and Sale Administrator during the life of the sale.

FREQUENCY/DURATION: A maximum of three times per year in active sale areas and once prior to closing of sale.

PROJECTED COSTS: \$1800/year

REPORTING PRODECURES: Information will be recorded on Archaeological Site Monitoring Reports and Timber Sale Inspection Reports. A copy of the Timber Sale Inspection Report is to be filed with the Forest Archaeologist. Archaeological Monitoring data and report may be submitted to the Utah State Historic Preservation Officer, but all data will be maintained in the Heritage Program Cultural Resource site files.

RESPONSIBILITY: District Ranger, Forest Archaeologist, Contracting Officer and Sale Administrator.

VEGETATION MONITORING PLAN - Snags, Down Woody Material

OBJECTIVE: To monitor stand structure in harvest units to determine if the alternative implemented met projections stated in the document for stocking, vegetative structural stage distribution, snag density and sizes, and down woody material. Includes field review and analysis of existing condition (following sale layout) and post harvest surveys.

ITEM TO MONITOR: Vegetation structure of treated stands. Method and quantity of post harvest treatments: fuels reduction treatments; weed and thin; and need for artificial reforestation.

Monitoring will be completed no more than 2 years after harvest activities are complete, and prior to reforestation activities, monitor treated stands for vegetation structure, snag densities and sizes, and down woody material amounts and sizes.

TYPE OF MONITORING: Implementation and effectiveness.

METHODS/PARAMETERS: Current stand exam requirements for a quick plot exam, brown's transects, and log survey.

FREQUENCY/DURATION: After harvest activities are complete, and prior to reforestation activities.

PROJECTED COSTS: \$2,400.

REPORTING PROCEDURES: R4 CSE reporting forms.

RESPONSIBILITY: District Silviculturist, District Wildlife Biologist, and Zone Fuels Specialist.

VEGETATION MONITORING PLAN - Reforestation, Natural and Artificial

OBJECTIVE: To assure naturally regenerated areas are meeting stocking certification requirements in Silvicultural Prescription. This includes monitoring for damage to seedlings caused by livestock, wildlife, or other causes.

Monitor aspen clearcuts for browse impacts. If regeneration is heavily browsed, fencing will be put in place to protect seedlings until the regeneration reaches approximately 5 feet in height. Based upon monitoring, reforestation protection activities may include the fencing of aspen regeneration units due to ungulate browse impacts.

Treatment of gophers will occur only where needed using underground treatment methods in spruce stands. Control measures may be applied when 25 to 35 percent of a 2-year old plantation or 40 to 50 percent of a 3 to 5 year old plantation contains active gopher mounds (The Northern Pocket Gopher, Ronald E. Bonar, Wallowa-Whitman National Forest, August 1995). During the first, third and fifth year stocking survey exams, the plantations will be visually assessed for gopher activity.

ITEM TO MONITOR: Harvest areas identified for natural and artificial regeneration.

TYPE OF MONITORING: Implementation and effectiveness.

METHODS/PARAMETERS: Stand examination of natural and artificial regeneration, measure survival plots, and review for animal damage.

FREQUENCY/DURATION: Perform first, third, and fifth year stocking surveys to monitor planted trees and assess natural regeneration. Measure survival and growth of staked rows the first and third growing season after planting.

PROJECTED COSTS: \$9.00/acre for each stocking survey.

REPORTING PROCEDURES: R4 CSE reporting forms.

RESPONSIBILITY: District Ranger, District Silviculturist.

NOXIOUS WEEDS MONITORING PLAN

OBJECTIVE: To detect changes in noxious weed populations in and adjacent to all project areas; and to assure the inclusion, implementation, and effectiveness of: Special Provision CT6.602# - Protection of disturbed areas from establishment of Noxious weeds. Requiring Timber Purchasers to furnish proof of weed-free equipment.

ITEM TO MONITOR: Changes in noxious weed populations along Forest Development Roads leading to the timber sale area and within harvest units.

TYPE OF MONITORING: Implementation and effectiveness.

METHODS/PARAMETERS: Visual observations at known inventoried locations within sale area and roads leading to sale.

FREQUENCY/DURATION: Start Date - beginning of sale. Completion Date - one year after completion of sale.

PROJECTED COSTS: \$500/sale/year.

REPORTING PROCEDURES: District Range Conservationist will write annual report documenting monitoring by December 31 each year.

RESPONSIBILITY: District Ranger, District Range Conservationist, Sale Administrator.

WILDLIFE MONITORING PLAN – Bald eagle activity

OBJECTIVE: To determine if bald eagles are using the area for foraging during migration period, and to determine need to implement mitigation measures.

ITEM TO MONITOR: Foraging activity of bald eagles around Huntington Reservoir.

TYPE OF MONITORING: Implementation.

METHODS/PARAMETERS: Visual observations, concentrating on the Huntington Reservoir area.

FREQUENCY/DURATION: During harvest operations, every other week from October 1 through November 15.

PROJECTED COSTS: \$500.

REPORTING PROCEDURES: Wildlife biologist will write narrative summary documenting the monitoring and results.

RESPONSIBILITY: District Wildlife Biologist.

WILDLIFE MONITORING PLAN – Road closure effectiveness

OBJECTIVE: To assure that road closures are implemented and effective, and that no unauthorized use by motorized vehicles is occurring.

ITEM TO MONITOR: Roads that have been identified to be closed to motorized use after close of sale.

TYPE OF MONITORING: Implementation and Effectiveness.

METHODS/PARAMETERS: For effectiveness monitoring, visual observation of closed roads either for tracks or user presence.

FREQUENCY/DURATION: Start Date – Commencement of road closure work. Completion Date – Two years after road closure work is complete. Effectiveness monitoring to be four visits per year for the first two years after close of roads.

PROJECTED COSTS: \$500/year

REPORTING PROCEDURES: Project Engineering representative and Sale Administrator will document completion of road closure work. Wildlife biologist will write annual summary narrative documenting observations of monitoring efforts.

RESPONSIBILITY: Project Engineering representative for system roads, project Sale Administrator for temporary roads (implementation), District Wildlife Biologist (effectiveness).

SWCP MONITORING PLAN - Implementation

OBJECTIVE: To document what practices were implemented to meet specific SWCPs and other requirements and where they were applied.

ITEMS TO MONITOR: Practices identified in Appendix A-1 that are applicable to the watershed, fisheries, and/or soil productivity issues and selected SWCPs identified in Appendix A-2.

TYPE OF MONITORING: Implementation.

METHODS/PARAMETERS:

Timber harvest and associated activities

Planning And Contract Preparation – Before the timber sale contract is completed, the presale forester will review the contract to ensure its consistency with the NEPA documents. Problems will be resolved prior to finalizing the contract through consultation with appropriate IDT members or other specialists. The consistency check will include a review of whether or not contract provisions have been included into the contract. The presale forester will document that the consistency review was satisfactorily completed.

FREQUENCY/DURATION: Once

REPORTING PROCEDURES: Email to Forest hydrologist

Sale and Unit Operations – Day-to-day implementation of specific practices is documented in timber sale inspection forms or contract daily diaries and kept in the official timber sale record by the TSA or COR. If the necessary practices are not being implemented, the TSA or COR will require implementation within a specified timeframe and do a follow-up inspection. Before the final acceptance of a harvest unit, the TSA must complete a final unit inspection and report. Any additional or corrective measures must be completed by the sale operator before going on to another unit.

FREQUENCY/DURATION: Variable

REPORTING PROCEDURES: Copies of inspection forms, daily dairies, and the final unit inspection report to Forest hydrologist. Region 5 of the Forest Service has developed 29 standard evaluation forms for their best management practices. Use of these forms is optional for implementation monitoring. The forms are available at <http://fsweb.r5.fs.fed.us/unit/ec/water/bmp.html>.

Road construction and reconstruction

Planning And Contract Preparation – Before the appropriate contracts are completed, the agency representative assigned to each project will review the contracts to ensure consistency with the NEPA documents. Problems will be resolved through negotiation with the contracting or cooperating agency or entity. Unresolved issues will be documented in detail.

FREQUENCY/DURATION: Once

REPORTING PROCEDURES: Email to Forest hydrologist

Construction Operations – Day-to-day implementation of specific practices is documented on inspection forms or contract daily diaries and kept in individual project files. If practices are not being implemented, the Forest Service project inspector(s) will advise the contractor's liaison of the requirements and schedule follow-up inspections.

FREQUENCY/DURATION: Variable

REPORTING PROCEDURES: Copies of inspection forms, daily dairies, and any final reports to Forest Hydrologist. Region 5 of the Forest Service has developed 29 standard evaluation forms for their best management practices. Use of these forms is optional for implementation monitoring.

PROJECTED TOTAL COSTS: \$2,000/sale/year.

MONITORING RESPONSIBILITY: District Ranger, Timber Sale Administrator or Project Supervisor/Administrator, Engineering Representative

SWCP MONITORING PLAN - Effectiveness

OBJECTIVE: To visually determine whether the practices used to meet the objectives or specifics of SWCPs were effective (successful).

ITEM TO MONITOR: Practices identified in Appendix A-1 that are applicable the municipal watershed, fisheries, and/or soil productivity issues and selected SWCPs identified in Appendix A-2.

TYPE OF MONITORING: Effectiveness

METHODS/PARAMETERS: Use the Pacific Southwest (R5) process for on-site and administrative evaluations as documented in the 2002 Best Management Practices Evaluation Program (BMPEP) User's Guide (USDA-FS-PSW, 2002). This document is available at http://fswb.r5.fs.fed.us/unit/ec/water/final_bmpep_protocols/BMPEP_Users_Guide_with_Onsite_Evaluation_Protocols_6_02.doc. A crosswalk will be developed between the two numbering systems used for individual practices. The forms may need modification to accommodate differences in practice specifications and will need modification for use with water collection and conveyance system reconstruction practices.

On-site evaluations

On-site evaluations are for specific, implemented practices. They are done by watershed specialists plus the individuals responsible for planning or administration of the activity.

FREQUENCY/DURATION: Most practices are evaluated once, after they have been exposed to the typical range of hydrologic events (summer thunderstorms and/or snowmelt runoff) but before site recovery obscures evidences of effectiveness or ineffectiveness. Exceptions are noted

in the User's Guide. The number of practices to be evaluated and the site selection method (random or pre-selected) will be chosen by the Forest Hydrologist in consultation with IDT members and the District Ranger.

REPORTING PROCEDURES: Completion of the appropriate forms and an annual narrative summary by the Forest Hydrologist. The administrative evaluation is done by an IDT selected by the District Ranger. This evaluation is an assessment of multiple practices for a project. The team will select the specific locations visited in the project area. The evaluations will reflect the team consensus.

FREQUENCY/DURATION: One evaluation per project the first or second field season following project completion.

REPORTING PROCEDURES: Completion of the appropriate forms and a narrative summary by the IDT selected by the District Ranger.

PROJECTED COSTS: \$2,500/year.

MONITORING RESPONSIBILITY: District Ranger, Forest Hydrologist