

APPENDIX B

MONITORING PLAN

Monitoring activities can be divided into Forest Plan monitoring and project-specific monitoring. The Bitterroot National Forest conducts and documents forest plan monitoring annually. This monitoring plan covers the Lyman Salvage Project. It describes monitoring activities that are designed to evaluate the implementation of the action alternatives.

Monitoring Conducted by the Interdisciplinary Team

After the Decision Notice is signed and before any management activities are implemented on the land and resources, the Interdisciplinary Team (IDT) will meet with the individuals who will be involved in and responsible for the implementation of the selected alternative. As a minimum, the IDT will review the rationale and objectives for the decision(s) that were made, the standards associated with project implementation, the responsibilities of implementing specific criteria and the types and intensities of monitoring scheduled with project implementation. This process will create the bridge between analysis planning efforts and project implementation efforts to achieve the desired results on the ground.

Representatives of the IDT will review project layout and draft contract prior to offering a timber sale, periodically during the life of the sale, and after the sale to see that the project complies with the intent and requirements of the planning effort. This effort would provide valuable feedback on the effectiveness of the planning effort.

Routine Implementation Monitoring

Routine implementation monitoring assesses whether the project was implemented as designed and whether or not it complies with the Forest Plan. Planning for routine implementation monitoring began with the preliminary design of the Lyman Project.

Routine implementation monitoring is part of the administration of all project contracts. Performance is monitored relative to contract requirements. Input by resource staff specialists, such as fisheries biologists, soil scientists, hydrologists, and engineers, is regularly requested during this implementation monitoring process. These specialists provide technical advice when questions arise during project implementation.

Monitoring is designed wherever possible to catch and assess problems before or when they occur so corrective measures can be taken. As such, it is also a quality control/quality assurance plan. By its nature, implementation monitoring, to be effective, requires an adaptive approach to management. That means when undesirable or unexpected results or conditions are identified through monitoring, the project will be assessed and altered as needed to meet the intent of the mitigation or proposed activity. This is explicitly described in some activities (i.e., if new heritage sites or sensitive plants are identified, unit boundaries or treatment types will be modified as necessary to protect the resource) but it is also implicit for the project as a whole. If or when these situations arise, project adjustments will be made on the basis of the desired and predicted outcomes discussed on the Decision Notice and this EA.

Bitterroot National Forest staff annually conduct a review of BMP implementation and effectiveness. The results of this and other monitoring are summarized annually in a Forest Plan Monitoring and Evaluation Report. This report provides information about how well the management direction of the Forest is being carried out, and measures the accomplishment of anticipated outputs, activities and effects.

Sensitive Plants

There were no sensitive plants found in the Lyman project area so no monitoring will be necessary. Monitoring of potentially suitable habitat would coincide with the noxious weed monitoring.

Noxious Weeds

Monitoring for weeds would consist of determining if spotted knapweed, houndstongue, Canada thistle or tall buttercup populations present in areas of proposed activities are increasing and if noxious weeds are spreading into areas not previously infested. Monitoring could consist of before and after photos, as well as recording general information on the size and condition of populations. If noxious weeds were determined to be increasing or spreading, appropriate treatments would be applied as specified in the 2003 Noxious Weed Treatment Project FEIS and ROD.

Timber and Silviculture

Monitoring the effects on vegetation will take place throughout the implementation and execution of this action, and for a number of years following implementation. Initially, the monitoring begins with the intensive investigation of the landscape vegetation mosaic based on series, habitat type, and management area land and resource objectives which are defined and refined as silvicultural management practices.

Following the selection of an alternative and the signing of the Decision Notice, site-specific silvicultural prescriptions will be prepared for each proposed treatment unit. On-the-ground implementation of the designated prescription will be monitored by a silviculturist and other involved specialists as unit design, layout, and marking occur. Contract preparation will be monitored and evaluated by program specialists to ensure proper site-specific mitigation measures are included in the timber sale and/or service contract provisions.

As the timber sale and/or service contract is executed and silvicultural activities progress, the Timber Sale Administrator or Contracting Officer's Representative, whichever is appropriate, will visit the sites on a regular basis. Depending on the level of activity, the contract administration personnel may visit sites as frequently as once a day. Contract administration is critical to the success of this process. All site visits by contract administration personnel are documented and reviewed by the Forest Service representative and the Forest Timber Contracting Officer under timber sale contracts or by the Contracting Officer when activities are implemented under a service contract. Contractual units are released from the Purchaser or Contractor's responsibility when all provisions and requirements of the contract have been satisfied.

Following implementation of initial treatments outlined by the selected alternative and fine-tuned by silvicultural prescriptions, post-treatment exams will assess the condition of the treated stands and identify the progression of additional treatments necessary to meet the target stand conditions outlined in the action alternative. This monitoring may identify modifications necessary for subsequent prescribed treatments along the trajectory to the desired future condition.

Fire Management

After prescribed fire operations are completed in any given unit or series of units, these area will be monitored by fire management personnel in order to minimize the risk that the fire does not escape into areas that were no intended to be burned. Such monitoring would occur until the burn units are no longer burning and are cold. After prescribed burning is completed in any of the units where timber harvest is conducted, these units will be monitored to determine if post-burn objectives, such as large woody debris retention objectives were met.

Watersheds

Implementation of applicable BMPs within harvest units and associated log hauling will be enforced by timber sale administrators (TSA) and effectiveness will be evaluated (monitored) during the TSA visits to the timber sale. Implementation and effectiveness of the implemented BMPs will be documented in the TSAs inspection report. Ineffective, or BMPs that were not correctly applied, will be noted and reviewed with the watershed specialist, soils scientist and/or fisheries biologist.

Determination of the reason for ineffectiveness and methods to improve effectiveness will be made by the above specialists, the TSA, and reviewed by the IDT. Summary of the implementation, effectiveness, evaluation of and any necessary improvements to BMPs will be summarized in the annual Forest Plan Monitoring Report.

To ensure that sediment reduction efforts are applied during watershed improvements and to document their effectiveness, contracting officers, fisheries or watershed specialists would monitor work during implementation. Sediment reduction efforts included such things as the use of silt fence between construction zones and streams where sediment transport is possible, erosion control mat or mulch on slopes adjacent to streams where culverts are removed, culvert removal during periods of low flow, construction and use of a by-pass channel during culvert removal, rehab of the by-pass channel, seeding, fertilizing, and mulching of disturbed ground.

Fisheries

Designated RHCA and SMZ buffers will be monitored during harvest to ensure that they are being followed.

Soils

During operations, activities will be monitored by Timber Sale Administrators/Forest Service Representative to determine compliance with standards and mitigation measures specified in this project.

Following operations, Units 1, 12, 5 will be assessed to determine the amount of new soil disturbance (Bitterroot National Forest Draft Soil Quality Survey Protocols 2003, Analysis File Soil-4). A soil quality survey will be conducted prior to operations with a similar survey conducted post activity. Results of the pre and post activity monitoring will be reported in the annual Forest Plan Monitoring Report. A copy of the results will be placed in the Lyman Salvage Sale implementation records. The Zone Watershed Specialist, Forest Soil Scientist, or other suitably trained individual will complete the monitoring.

Wildlife

Snags and replacement snags will be designated in the silvicultural prescription, and they will be identified and marked for retention during the sale preparation activities. The wildlife biologist will be consulted as needed, to ensure that the measures identified in this EA have been met. The Timber Sale Administrator, through routine periodic inspections, will ensure that contractual provisions specific to “wildlife reserve trees” are being properly implemented by the Purchaser.

Any bogs, wallows, or other high-use wildlife areas that may be identified during sale preparation will be reviewed by the wildlife biologist for the appropriate mitigation measures.