

APPENDIX I

MONITORING AND EVALUATION

The decisions outlined in the Headwaters RMP will be implemented over a period of ten to twenty years or more, depending on the availability of funding and manpower. The effects of implementation will be monitored and evaluated on a periodic basis over the life of the plan. The general purposes of this monitoring and evaluation will be:

- (1) To determine if an action is fulfilling the purpose and need for which it was designed, or if there is a need for modification or termination of an action.
- (2) To discover unanticipated and/or unpredictable effects.
- (3) To determine if mitigation measures are working as prescribed.
- (4) To ensure that decisions are being implemented as scheduled.
- (5) To provide continuing evaluation of consistency with state and local plans and programs.
- (6) To provide for continuing comparison of plan benefits versus costs, including social, economic, and environmental.

A specific monitoring plan will be written for the wildlife, watershed, and range programs. This plan will provide a framework for choosing the study methods that will provide the information needed to issue and implement specific management decisions which effect watershed, wildlife, and range. Monitoring efforts will focus on allotments in the Improve category. For the range program, methodologies are available for monitoring vegetative trend, forage utilization, actual use (live-stock numbers and periods of grazing), and climate. The data collected from these studies will be used to evaluate current stocking rates, to schedule pasture moves by livestock, to determine levels of forage competition, to detect changes in plant communities, and to identify patterns of forage use. Some of the methodologies that could be used include: Daubenmire canopy transects, Lommason utilization transects, key forage plant utilization estimates, aerial and ground reconnaissance of animal numbers and grazing patterns, actual use questionnaires, and low altitude aerial photography transects.

Priorities for monitoring grazing allotments will be established in this plan. The methodology and intensity of study that is chosen for a particular allotment will be determined by the nature and severity of the resource conflicts that are present in that allotment.

For the wildlife program, monitoring will be directed at the biotic resource components using both temporary and permanent studies. The findings from these studies can be used to monitor responses in habitat condition and trend; monitor forage availability, composition, and vigor; monitor changes in cover and habitat effectiveness; and monitor habitat management objectives.

Some of the methodologies that are available include: Daubenmire canopy coverage transect, modified browse canopy coverage transect, woody riparian surveys and photo plots, range site condition ratings, height/weight grazed plant method, color infrared aerial photography, pellet group transects, fisheries species composition and population surveys, and nongame bird and small mammal plots.

Monitoring for the watershed program will mainly involve monitoring soil erosion, although trends in streambank stability and water quality will be monitored for mining and forestry activities. Some of the methodologies that can be used are the point frame method, the sediment trap method, the particle transport method, and channel geometry.

Specific monitoring plans for other programs will be developed if the need arises.

The data collected from the monitoring and evaluation process will be analyzed and fed back into the decision making process. This will provide information regarding the effects of the land use decisions, the adequacy of mitigation methods, etc. If monitoring indicates that significant unexpected adverse impacts are occurring or that mitigating measures are not working as predicted, it may be necessary to amend or revise the RMP. Conversely, if implementation and mitigating efforts are highly successful, monitoring and evaluation efforts may be reduced.