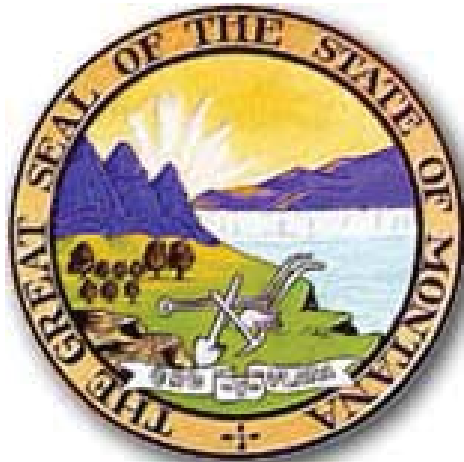


**MONTANA DEPARTMENT OF NATURAL RESOURCES
AND CONSERVATION**



**STATE FOREST LAND
MANAGEMENT PLAN**

FINAL ENVIRONMENTAL IMPACT STATEMENT

RECORD OF DECISION

MAY 30, 1996

TABLE OF CONTENTS

I. Introduction	ROD-1
A. The Decision To Be Made	ROD-1
B. Authority For The Decision	ROD-1
II. Decision	ROD-1
III. Rationale For The Decision	ROD-4
A. Selection Criteria Listed in the EIS	ROD-4
B. Legal Framework	ROD-5
C. Other Reasons For The Decision	ROD-6
IV. Other Alternatives Considered	ROD-7
V. Implementation of the Plan	ROD-10
A. Managing the Plan	ROD-10
B. Resource Management Standards	ROD-12
Biodiversity	ROD-12
Silviculture	ROD-15
Road Management	ROD-18
Watershed	ROD-21
Fisheries	ROD-26
Threatened and Endangered Species.....	ROD-29
Sensitive Species	ROD-31
Big Game	ROD-33
Grazing on Classified Forest Lands	ROD-34
Weed Management	ROD-36
C. Management Direction	ROD-38
D. Categorical Exclusions	ROD-40
VI. Project Record	ROD-42
VII. Signature of Deciding Official	ROD-42

I. INTRODUCTION

Montana's forests are an integral part of the economic, recreation and aesthetic values of the state. The many different forest landowners in Montana reflect the spectrum of philosophies used in managing those forest lands. This management plan applies to the 662,000 acres of forested lands of the total 5.2 million acres of school trust lands administered by DNRC.

will make site-specific decisions more efficient by

A. The Decision to Be Made

The Trust Land Management Division of DNRC will implement the following State Forest Land Management Plan (Plan) to provide field personnel with consistent policy, direction, and guidance for the management of state forested lands.

The Department also adopts a list of types of actions that qualify for categorical exclusion from the preparation of an EA or EIS, unless extraordinary circumstances occur. The list of adopted Categorical Exclusions is presented in section V of this Record of Decision (for more detailed information, see Chapter V of the FEIS).

This is a programmatic plan; it provides policies and guidelines for managing state-owned forest lands. It contains the general philosophies and management standards that will provide the framework for our project-level decisions. It does not address site-specific issues, make specific land use allocations or identify precise future output targets for individual resources.

The Plan provides a guiding framework for proposing and analyzing site-specific projects. This Plan and the corresponding FEIS will be useful reference documents that

helping us remain consistent with our overall management philosophy, and by saving needless repetition of the reasoning behind policy decisions that have already been made. However, neither the EIS nor the Plan will substitute for public involvement and proper analysis and documentation in future project-specific decisions.

B. Authority for the Decision

As the Director of the Montana Department of Natural Resources and Conservation, I have decision-making authority for the State Forest Land Management Plan.

All state school trust lands are under the direction and control of the State Board of Land Commissioners which consists of the governor, superintendent of public instruction, auditor, secretary of state, and attorney general. (Article X, section 4, 1972 Montana constitution) The Land Board will vote to approve implementation of the Plan.

II. DECISION

I have selected alternative *Omega* to be the management philosophy of DNRC for the management of state forested trust lands. *Omega* provides the best opportunity for meeting the trust mandate while contributing to the health and diversity of state forest lands.

Omega

Our premise is that the best way to produce long-term income for the trust is to manage intensively for healthy and biologically diverse forests. Our understanding is that a diverse forest is a stable forest that will produce the most reliable and highest long-term revenue stream. Healthy and biologically diverse

forests would provide for sustained income from both timber and a variety of other potential uses. They would also help maintain stable trust income in the face of uncertainty regarding future resource values.

In the foreseeable future timber management will continue to be our primary source of revenue and primary tool for achieving biodiversity objectives. By promoting biodiversity we will protect the future income-generating capacity of the land by maintaining or restoring healthy and productive ecosystems.

We would take a 'coarse filter' approach to biodiversity by favoring an appropriate mix of stand structures and compositions on state lands. A coarse filter approach "assumes that if landscape patterns and process (similar to those species evolved with) are maintained, then the full complement of species will persist and biodiversity will be maintained" (Jensen and Everett, 1993). A diversity of stand structures and compositions provides a broad range of current and prospective trust revenue opportunities including a sustained yield of timber, maintenance of forest health and biodiversity, and other outputs, while reducing risks of catastrophic fires and insect or disease attacks.

The coarse filter approach supports diverse wildlife habitat by managing for a variety of forest structures and compositions, instead of focusing on habitat needs for individual, selected species. Because we cannot ensure that the coarse filter approach will adequately address the full range of biodiversity, we would also employ a 'fine filter' approach for threatened, endangered, and sensitive species. The fine filter approach focuses on single species' habitat requirements.

Within areas of large, blocked ownership, we would manage for a desired future condition

characterized by the proportion and distribution of forest types and structures historically present on the landscape. Our typical analysis unit would be a third order drainage wherein we would focus on maintaining or restoring the forest conditions that would have naturally been present given topographic, edaphic and climatic characteristics of the area. Any particular combination of site, topography and climate has an associated disturbance regime and range of possible forest conditions. Among the forest conditions we will consider are successional stage, species composition, stand structure, patch size and shape, habitat connectivity and fragmentation, disturbance regime, old-growth distribution and composition, and habitat type. Timber harvests would be designed to promote long-term diversity and an appropriate representation of forest conditions across the landscape. Where our ownership contains forest structures made rare on adjacent lands due to the management activities of others, we would not necessarily maintain those structures in amounts sufficient to compensate for their loss when assessed over the broader landscape. However, if our ownership contains rare or unique habitat elements occurring naturally (e.g, bog, patches of a rare plant), we would manage so as to retain those elements.

On areas of smaller and/or scattered ownership we would not frequently be in a position to provide for appropriate representation of forest conditions across the broader landscape level. Our activities would still be based on restoring a semblance of historic conditions within our ownership. We would consider management of our lands to contribute to the diversity of forest conditions over the larger landscape. Where our ownership contains forest structures made rare on adjacent lands due to others' management activities, we would not

necessarily maintain those structures in amounts sufficient to compensate for their loss when assessed over the broader landscape. However, if our ownership contains rare or unique habitat elements occurring naturally (e.g, bog, patches of a rare plant), we would manage so as to retain those elements.

In both types of ownership, timber harvest would play the dual role of generating revenue while also serving as our primary tool for producing the desired range of stand structures and distributions. The relative market value of timber, the existence of a manufacturing and marketing infrastructure, and our own technical expertise and long experience give us an advantage for using timber management as the primary tool to achieve biologically diverse forests. We would maintain an up-to-date inventory of our forest sites. We would compile a list of timber sales that contribute to the goals of biodiversity and offer the highest near-term income potential. We would manage so as to meet annual sustained yield levels identified in the study mandated by HB 201 (§ 77-5-221 through 223, MCA). That study will incorporate both the philosophy and standards of this alternative. Fundamental to this philosophy is the concept that managed forests should reflect historic distributions and patterns of forest types and successional stages. We will re-evaluate our annual sustained yields at least once every 10 years, as required by § 77-5-221 through 223, MCA.

Each land office would have annual goals including a timber sale target as well as goals for marketing other uses. Many of these goals would include the use of timber harvest as a tool. For example, forests dominated by immature second-growth timber might be thinned to produce small logs and pulpwood, while reducing stand stress levels and hastening development of old-growth features

and high-value forest products. In areas with considerable old-growth, some stands might be managed on long rotations to perpetuate old-growth, while others might be managed on shorter rotations to produce high yields of timber.

Management for forest health and biodiversity would provide us with a consistent basis from which to develop action alternatives at the project level. Within the landscape, reference to a historical condition supplies us with an estimate of future risk and an ecologically defensible desired state.

Prescribed fire will play a larger role in Omega than in any of the other alternatives. Restoration of historical forest conditions to the landscape requires that prescribed burning be among the management tools available. For centuries, fire was the predominant disturbance agent on the landscape. The last several decades have seen timber harvest replace fire as the primary disturbance agent in our forests. This has caused shifts in species compositions and the representation of various forest cover types.

Within this alternative, fire may be prescribed as an underburn treatment in some types of stands, or as a post-harvest treatment in other types. We would continue to suppress wildfire, however. The Biological Diversity Strategies for Forest Type Groups attachment (see Appendix RMS) would serve as a guideline describing situations where we may use prescribed fire.

We would actively seek ways to minimize the amount of new roads needed to support management activities. We would promote cooperative road management planning among adjacent landowners as one way to minimize roads. We would consider

obliterating roads that are not primary access routes. We would close most new roads following use in order to minimize open road mileage, unless they provide planned public access or regular administrative access.

We would pursue other income opportunities as guided by changing markets for new and traditional uses. These uses may replace timber production when their revenue exceeds long-term timber production revenue potential. Where we pursue non-timber uses, we may not comply with the biodiversity elements of this alternative. Opportunities might include development rights on a parcel of waterfront land with high recreation potential; homesite development; leasing an entire drainage with substantial low-elevation old-growth to a coalition of environmental groups; or a land exchange program designed to increase the average income-producing value of our holdings. However, because we expect these other income opportunities to occur on a minor amount of the forest acreage, these uses would not compromise the overall fundamental premise of managing for biodiversity.

III. RATIONALE FOR THE DECISION

Omega represents a management philosophy that promotes the purposes of these trust lands, yet recognizes the changing variety of interests in and uses of these forest lands. I have considered all of the alternatives and have chosen Omega based on the selection criteria listed in the EIS for determining the most appropriate management philosophy. In addition to those criteria, federal and state laws were also considered. These factors are discussed below:

- A. Selection Criteria Listed in EIS
- B. Legal Framework

C. Other Reasons for My Decision

A. Selection Criteria Listed in EIS

The following selection criteria were identified in the EIS:

- 1) *monetary return to the school trust;*
- 2) *long term health of our forest resource;*
and
- 3) *effect on the biological and physical environment.*

It is my opinion that two of the alternatives, Gamma and Zeta, are seriously deficient according to one or more of the criteria above. Gamma and Zeta ranked at the bottom of the expected share of total school funding and net present value. They did fair better when net present value was added to the remaining timber asset. However, the low harvest levels of Gamma and Zeta indicate that there would be increased risk of mortality due to declines in forest health.

The remaining five alternatives, Alpha, Beta, Delta, Epsilon, and Omega, do satisfy all of the criteria to varying degrees. This is demonstrated in the effects assessment presented in Chapter IV of the FEIS. Of the remaining five, I selected Omega.

In terms of the selection criteria, Omega is predicted to provide the second highest economic return (NPV) of all of the alternatives. This prediction is based on the harvest level scenarios with which we conducted our effects assessment. The actual harvest levels will be determined through the sustainable yield study commissioned by § 77-5-221 through 223 MCA (HB 201 1995). That study will use the management philosophy and RMS of the final alternative to determine what will be our legislatively mandated sustainable harvest.

In addition, Omega allows flexibility for the pursuit of income opportunities other than timber when their revenue potential meets or exceeds that of long-term timber potential. This will allow us to respond to changing markets for new and traditional uses and products, thus meeting our trust mandate.

I believe that Omega will provide an opportunity to meet our trust mandate, while also ensuring the health and diversity of state forest lands. The biodiversity management philosophy of Omega, similar to those philosophies used nationwide by other natural resource managers, will allow us to manage the proportion and distribution of forest types and structures that were historically present on the landscape. As a result, we will be able to provide for the long-term health of the forest by reducing risks of catastrophic fires, and insect or disease attacks.

I have reviewed the environmental assessment for all of the alternatives. Omega will have a mid-range impact on biological and physical resources, when compared to the other alternatives. However, I believe that the Resource Management Standards developed for Omega will provide sufficient mitigation measures to protect Montana's resources.

On balance, when I evaluated how each of the alternatives met the selection criteria, I judged that Omega best met the combination of the three selection criteria.

B. Legal Framework

Trust Mandate

The Enabling Act of 1889 (25 STAT. 679) granted the state of Montana Sections 16 and 36 in each township (or other lands in lieu of those sections) "for the support of common

schools." While all trust lands are considered state-owned, they may only be managed to fulfill the specific purposes for which the trust was created (i.e., the lands must be managed to provide income for the designated trust beneficiary such as the common schools, agricultural college, mining college, asylums, reform school, or public buildings).

I believe that by implementing Omega, DNRC will best meet its trust obligations to produce revenue in support of common schools. Omega will allow us to produce short- and long-term income for the trust by managing intensively for healthy and biologically diverse forests. A diverse and stable forest will produce the most reliable short- and long-term revenue stream. Timber and other uses will provide for sustained income and will also help maintain stable trust income in the face of uncertainty regarding future resource values.

The constitution also gives the State Board of Land Commissioners the authority to manage and control the disposition of the trust lands. The Board can take no action contrary to the trust principles outlined above. However, they have broad discretion in applying those principles. That discretion is necessary because DNRC is required not only to satisfy trust principles, but also to comply with state statutes.

The discretionary authority of DNRC is based on two principles. The first is the concept of sustained yield. The Montana Supreme Court has said, "In exercising its constitutional authority, the legislature has provided that full market value shall encompass the concept of sustained yield." Jerke vs. Department of State Lands (now the Department of Natural Resources and Conservation). Therefore, it is within the discretion of the DNRC to receive less income currently, if this action will

maintain the long term productivity of the land and guarantee income to the beneficiaries in the long run.

The second important principle is that DNRC's management of school trust lands is subject to state and federal laws enacted to protect public health, safety, welfare and the environment. Montana's Constitution requires that "The state and each person shall maintain and improve a clean and healthful environment in Montana for present and future generations" and directs the legislature to enact laws to this end (1972 Montana Constitution, Article IX, Section 1).

I believe that the selection of the alternative Omega properly exercises the discretion of the Land Board in meeting short- and long-term trust obligations as well as complying with appropriate state and federal laws.

The Montana Environmental Policy Act

DNRC's activities in the management of state school trust lands are also subject to the planning and environmental assessment requirements of the Montana Environmental Policy Act (MEPA) (§ 75-1-101, MCA) and the administrative rules implementing MEPA (ARM 26.2.628-663). This statute directs state agencies to improve and coordinate their planning processes that the state may "create and maintain conditions under which man and nature can coexist in productive harmony, recognize the right to use and enjoy private property free of undue government regulation, and fulfill the social, economic, and other requirements of present and future generations" (§ 75-1-103, MCA).

DNRC has complied with MEPA in the development of this programmatic plan. The preparation of the EIS included extensive public scoping which led to the development

of six distinct management philosophies. After the alternatives were developed and the environmental impacts of each alternative were assessed for a range of resources, a Draft EIS was released. Public comment was requested and received through the mail as well as at public hearing held throughout the state. Public comments were used in the development of the Omega alternative, which was then presented in the Final EIS. I have reviewed the Draft and Final EIS and am satisfied that DNRC, using the best available scientific data, has met both the specific procedural requirements and the intent of MEPA in the development of this Plan.

Land Administration/ Resource Management Laws

DNRC's management of school trust lands is subject to state and federal laws enacted to protect public health, safety, welfare and the environment (as listed in the Appendix LGL of the EIS). Montana's Constitution requires that "The state and each person shall maintain and improve a clean and healthful environment in Montana for present and future generations" and directs the legislature to enact laws to this end (1972 Montana Constitution, Article IX, Section 1).

I believe that Omega adequately fulfills our obligation to state and federal laws.

D. Other Reasons For The Decision

On June 19, 1995, DNRC released the State Forest Land Management Plan Draft Environmental Impact Statement (DEIS) to the public for review. The comment period lasted for 45 days and closed on August 4, 1995. In addition, testimony was recorded at public hearings held in Billings, Bozeman, Kalispell and Missoula. One hundred seventy-four comments were received.

Substantive comments were received regarding almost every resource area and issue category covered in the DEIS. Of particular concern were the method of our economic analysis, impacts of management activities on threatened and endangered wildlife and fisheries, protection of watersheds (particularly in Northwestern Montana) and riparian areas, road density, recreational access, forest health, old-growth, control of noxious weeds, and the merit of specific Resource Management Standards (RMS) presented in the DEIS. A summary of the public comments and our responses are in Appendix RSP of the FEIS.

Several issues were identified by the public which precipitated changes, including categorical exclusions, road management and the RMS. As a result of this input, three categories of categorical exclusions were dropped from further consideration: timber harvest, timber stand improvement and prescribed fire. The road management standards were amended to clarify policy on road closures under each alternative. Additions and amendments were also made to other resource management standards. For instance, the Fisheries RMS were expanded to include an explanation of Recommendation #17 of the Flathead Basin Forest Practices and Fisheries Cooperative Program for the protection of bull trout and westslope cutthroat trout, as well as the Immediate Actions developed by the Governor's Bull Trout Restoration Team. The Sensitive Species and Threatened and Endangered Species RMS were modified to further clarify our policy in these areas.

The public comments received on the DEIS were instrumental in the development of the Omega alternative. I believe that Omega meets our trust obligations and complies with state and federal laws, while reflecting the

concerns of the public and our staff in managing forested trust lands.

III. OTHER ALTERNATIVES CONSIDERED

Originally six alternatives were developed through a process of internal discussion, public discussion, development of preliminary concepts, and a rigorous screening process. After release of the DEIS, a seventh alternative, Omega, was developed based on public comments and input from our staff. The Omega alternative was developed using Beta as a philosophical base and then combining elements of Beta, Delta and Epsilon.

The narratives below explain the core concepts of each of the original alternatives (the text of Omega is presented on page ROD-1. Each approach represents differing beliefs and assumptions as to the best way to meet the trust mandate.

Alpha

This is the way we do things now, and it is the path we would continue to follow in the absence of major changes in legislative or policy direction. We would provide income to the trust by marketing a sustainable harvest of forest products while allowing other revenue-generating uses, such as grazing and cabin-site leasing, in response to applications initiated by the public.

We would meet legal and/or generally accepted standards of environmental protection. Existing standards and guidelines, and all other current plans, would remain in effect. Standards and guidelines would be modified or expanded when conditions warranted such action.

Beta

Under Beta, we assume that intensive management would promote healthy and productive ecosystems while yielding greater long-term income than natural processes alone would produce. We would promote an ecologically diverse, resilient, and productive forest. Managing for diversity of stand structures would provide a sustainable yield of timber and other outputs whose cumulative value would exceed that from timber alone.

Timber harvest would play the dual role of directly generating revenue, as in the past, while also serving as our primary tool for producing the desired range of stand structures and patterns. We would also use other measures to enhance environmental quality. Because diverse wildlife habitat would be supported by managing for a variety of forest conditions, we would de-emphasize standards for individual species.

Gamma

An underlying assumption of Gamma is that growing population and a fixed land base will cause the value of forested lands to be driven high enough that a diverse array of small annual yields from natural ecosystems will produce the greatest possible long-term average trust income. Current uncertainty in the politics of natural resource allocation makes it smarter for us to preserve the widest and richest possible array of future options, rather than maximize revenue in the short run and risk significantly limiting future options.

Under Gamma, our program direction would emphasize restoring and maintaining natural ecosystems under the assumption that we can do little to improve on nature's ability to sustain a productive and healthy ecosystem. We would expect relatively small marketable yields each year, but would expect the quality

and diversity of marketable opportunities to grow rather than diminish with passing time.

Delta

Under this alternative, we assume that the greatest long-term average return would come from competitively marketing our resources, focusing on flexibility, creativity, and attention to financial rate of return. Forest land management would be strongly influenced by market conditions.

We would inventory potential money-making opportunities and use financial analysis as the first indicator for initiation and timing of projects. Our decisions would balance our response to changing market conditions with maintaining technical adaptability, so that we would not abruptly drop one activity to begin another. However, we would be strongly influenced by market conditions such as cycles in demand and price for commodities or unique recreational demands. Dominant land uses could shift with changing market trends, but we would not normally make disruptive changes in response to temporary market variations. This approach would emphasize a high degree of flexibility in choosing dominant land uses.

Epsilon

Under this program, we assume that the relative market value of timber, the existence of a manufacturing and marketing infrastructure, and our own technical expertise and long experience give us a natural advantage that makes timber management the best way to maximize long-term average trust income. Consequently, we would formalize timber marketing as our primary business. Our main program goal would be to offer the harvest level and mix of sales most appropriate for current market conditions and long-term sustainable yield.

We would meet the minimum acceptable standards of environmental protection. In cases where the standards allowed discretion, we would accept some adverse environmental effects in order to earn larger long-term monetary returns to the school trust. In cases of uncertain environmental impacts, we would take some risk in favor of earning greater monetary return.

Zeta

Under this program, we assume that changing social values, an increasing demand for quality outdoor experiences, and our status as a large forest land manager put us in a unique position to maximize long-term average trust revenue by specializing in marketing outdoor recreation and wildlife-related opportunities. Our program direction would emphasize wildlife and recreation management first and other activities only to the degree that they did not conflict with, or would enhance, these primary resource values.

We would inventory opportunities for making money through emphasizing recreation and/or wildlife management. Under this strategy, we would concentrate our efforts on initiating and actively marketing proposals that would provide income from wildlife and recreation management.

V. IMPLEMENTATION OF THE PLAN

This section includes:

- a brief summary of how the Plan will be managed (see FEIS Appendix MNG for more detail);
- the full text of the Resource Management Standards that will be implemented in this Plan;
- additional management direction relating to issues of access, administrative coordination, cumulative environmental effects, conflicting land uses, public involvement and recreation; and
- a list of the Categorical Exclusions adopted under this Plan.

A. Managing the Plan

Beginning in the year 2000, and every five years thereafter, the Forest Management Bureau Chief would make a written report to the Director of DNRC and the Trust Land Management Division Administrator on the current status of Plan implementation and effectiveness, including a recommendation on the need for significant changes to the Plan.

The Plan could be reviewed and changed at any time for one or more of the following reasons:

- 1) new legislation is passed that is not compatible with the chosen alternative;
- 2) new direction from the State Board of Land Commissioners; or
- 3) the Forest Management Bureau Chief judges that original assumptions supporting the Plan no longer apply.

Minor changes or additions could be made as long as they were compatible with the overall Plan. Cumulative minor changes could result in a programmatic review of the entire Plan.

The Forest Management Bureau Chief could change management direction without changing the Plan if the proposed change did not violate the fundamental intent as reflected in the Plan and EIS.

For example, as our resource specialists became aware of new information through their ongoing review of scientific literature, we might modify our biodiversity strategy without amending the plan as long as the changes remained consistent with our original intent.

Field Implementation and Compliance

We implement the Plan to be a learning process. The Department will conduct a phased-in implementation of the Plan. The development of implementation guidance and monitoring procedures, as well as the training of personnel, will be an on-going process.

On all projects that have already gone through the MEPA public scoping process, we won't require that all elements of the Plan be implemented. However, these projects will be evaluated to discern all reasonable opportunities to comply with the Plan. This will largely depend on where the project is in the process. For example, if scoping has begun yet no alternatives have been developed, there will be more opportunity to develop an alternative consistent with the Plan philosophy and standards. If alternatives have already been developed and/or analyzed, there may be opportunities for incorporating Resource Management Standards into project design.

On new projects, all applicable Resource Management Standards and developed guidance will be implemented. Additional guidance, if necessary, will be implemented as it is developed.

The Department is not requesting additional FTE or budget at this time. This is to allow DNRC to gain experience in implementing the Plan and to determine, through that experience, if additional personnel and budget are needed to fully implement the plan.

Our implementation training process will include opportunities for field managers to test the Plan against various situations they expect to face. Interpretation would be through continuing dialogue between field personnel, managers, and the Forest Management Bureau.

The following measures would be used to ensure that the Plan is being followed by DNRC staff and field personnel:

- 1) During our annual review, we would revise Program goals and objectives as necessary to remain in compliance with the Plan.
- 2) We would monitor individual resources, based on resource management standards specified in the Plan, and take the prescribed corrective actions when problems occurred. We would also ensure that prescribed corrective actions were included in contracts and implemented.

B. Resource Management Standards

BIODIVERSITY

WE ADOPT THE FOLLOWING DEFINITION OF BIODIVERSITY (BIOLOGICAL DIVERSITY):

In the simplest of terms, biological diversity is the variety of life, and its processes. It includes the variety of living organisms, the genetic differences among them, and the communities and ecosystems in which they occur.¹

Premise

A diversity of stand structures and compositions provides a broad range of current and prospective trust revenue opportunities including a sustained yield of timber, maintenance of forest health and biodiversity, and other outputs, while reducing risks of catastrophic fires, and insect or disease attacks.

Standards

Fundamental Approach

- 1) We would promote biodiversity by taking a 'coarse filter' approach thereby favoring an appropriate mix of stand structures and compositions on state lands. Appropriate stand structures and compositions would be based on ecological characteristics (e.g., land type, habitat type, disturbance regime, unique characteristics). A coarse filter approach "assumes that if landscape patterns and process (similar to those species evolved with) are maintained, then the full complement of species will persist and biodiversity will be maintained" (Jensen and Everett, 1993).
- 2) The coarse filter approach supports diverse wildlife habitat by managing for a variety of forest structures and compositions, instead of focusing on habitat needs for individual, selected species. Because we cannot assure that the coarse filter approach will adequately address the full range of biodiversity, we would also employ a 'fine filter' approach for threatened, endangered, and sensitive species (see T&E Species RMS, and Sensitive Species RMS). The fine filter approach focuses on a single species' habitat requirements.

Landscape Analyses

- 3) Within areas of large, blocked ownership, we would manage for a desired future condition characterized by the proportion and distribution of forest types and structures historically present on the landscape. Our typical analysis unit would be a third order drainage wherein we

Biological Diversity on Federal Lands: Report of a Keystone Policy Dialogue. 1991. The Keystone Center, P.O. Box 606, Keystone, CO 80435.

would focus on maintaining or restoring the forest conditions that would have naturally been present given topographic, edaphic and climatic characteristics of the area. Any particular combination of site, topography and climate has an associated disturbance regime and range of possible forest conditions. Among the forest conditions we will consider are successional stage, species composition, stand structure, patch size and shape, habitat connectivity and fragmentation, disturbance regime, old-growth distribution and composition, and habitat type. Timber harvests would be designed to promote long-term diversity and an appropriate representation of forest conditions across the landscape. Where our ownership contained forest structures made rare on adjacent lands due to others' management activities, we would not necessarily maintain those structures in amounts sufficient to compensate for their loss when assessed over the broader landscape. However, if our ownership contained rare or unique habitat elements occurring naturally (e.g, bog, patches of a rare plant), we would manage so as to retain those elements.

- 4) On areas of smaller, and/or scattered ownership we would not frequently be in a position to provide for appropriate representation of forest conditions across the broader landscape level. Our activities would still be based on restoring a semblance of historic conditions within our ownership. Where our ownership contained forest structures made rare on adjacent lands due to others' management activities, we would not necessarily maintain those structures in amounts sufficient to compensate for their loss when assessed over the broader landscape. However, if our ownership contained rare or unique habitat elements occurring naturally (e.g, bog, patches of a rare plant), we would manage so as to retain those elements.
- 5) We would make reasonable attempts to pursue cooperative planning with major adjoining landowners. The objectives of cooperative planning would be to: (a) maintain appropriate amounts and distribution of stand structures and species mixtures to promote biodiversity at a landscape level; and (b) equitably maintain or promote trust revenue opportunities over the long term.
- 6) Within an appropriate analysis area, DNRC would seek to maintain or restore old-growth forest in amounts of at least half the average proportion that would be expected to occur with natural processes on similar sites. We would maintain sufficient replacement old-growth to meet this goal given that old-growth does not live forever. However, DNRC would not maintain additional old-growth to compensate for loss of old-growth on adjoining ownerships. Procedures such as those described in "Biological Diversity Strategies for Forest Type Groups" or other technical references would be used for designating and managing old-growth blocks and replacement areas.
- 7) "Biological Diversity Strategies for Forest Type Groups" or other current references would be used as guidance for landscape-level biodiversity evaluations, old-growth protection, and design of timber harvests to promote biodiversity. The Biological Diversity Strategies would be updated periodically, with professional review, as new information and concepts are developed.

Monitoring

- 8) A subset of revenue-generating activities would be field reviewed by specialists after project completion, or every five years for ongoing projects, to evaluate the application of biological diversity measures at a stand and landscape level.
- 9) Landscape evaluations would be checked to compare actual effects of management activities and natural processes against desired or predicted effects. Trends in forest cover characteristics, habitat values, insect and disease activity, and other natural disturbances would be evaluated.
- 10) Cooperative plans would be evaluated as needed, to monitor how successfully they are being implemented.
- 11) Results of monitoring would be used to help plan follow-up and future activities in the evaluation area, and to improve our ability to predict the effects of activities in similar situations elsewhere. Monitoring would be frequent enough to accomplish these purposes effectively.

References - Biodiversity

- Jensen, M.E. and R. Everett. 1993. An overview of ecosystem management principles. In: Eastside Forest Ecosystem Health Assessment. Vol II. Ecosystem Management: Principles and Applications. M.E. Jensen and P.S. Bourgeron, editors. USDA, National Forest System, Forest Service Research, pp. 9-18.
- Remington, D. 1993. Biological diversity strategies for forest type groups. Montana Department of State Lands, unpublished paper. (The text of this paper follows on the next page).

SILVICULTURE

Standards

Biological

- 1) All prescribed silvicultural treatments would maintain the long-term productivity of the soil and site in order to ensure the long-term capability to produce trust revenue and maintain soil hydrologic function.
- 2) Ecological characteristics of the site would be evaluated and used to develop stand management regimes that are compatible with the site. Management regimes would address stand structures and development, species mixtures, silvicultural systems, and time periods for reforestation. Suitable management regimes are those which can be expected to realize the productive capability of the site for producing desired products and benefits. They also minimize the risk of losses to biotic or abiotic agents (e.g., wind-throw, micro-climate changes, etc.) which would prevent achievement of these benefits.
- 3) The long-term quality of the genetic base would be maintained or improved in terms of growth, form and adaptation of tree species.
- 4) Diversity of species, ages, and structure would be maintained within or between stands, in order to maintain a complex and stable ecosystem that would be buffered against losses to insects, disease, wildfire, and climatic elements.

Silvicultural Prescriptions

- 5) Silvicultural prescriptions would be prepared for all planned treatments. These prescriptions would be written to accomplish the following objectives in a clear and organized manner:
 - a) Guide DNRC personnel in the correct implementation of the prescribed treatments.
 - b) Provide a record of the objectives and details of prescribed treatments for future reference.
 - c) Document conformity of the prescribed silvicultural treatments with requirements of the State Forest Land Management Plan and relevant DNRC Resource Management Standards.

Financial

- 6) A financial evaluation would be done for all proposed silvicultural treatment(s) using an appropriate combination of the following procedures:

- a) The use of FAST or similar software approved by the Forest Management Bureau to estimate the treatment net present value (NPV) and land expectation value (LEV). This would be done on at least one stand per administrative Unit per year, and when proposed activities represent a questionable investment.
 - b) The foresters use their best professional judgement to rank the financial merit of treatment alternatives.
- 7) All recommended silvicultural treatment regimes would have to produce a net return for the combined current and future stands (i.e., LEV) that was higher than the net return for the "no action" alternative. These financial comparisons would need to consider effects of the prescribed treatments on future harvest opportunities in other stands in the vicinity, as well as discounted costs and returns at the stand level.
 - 8) The discount rate for evaluating silvicultural treatment investments would be based on the returns from AAA corporate bonds and an estimate of risk. The discount rate is currently 3.75 percent, and would be updated periodically.

Integration with Other Resource Management Standards

- 9) Prescribed silvicultural treatments would meet other resource management standards and comply with all appropriate statutes and regulations, in a manner consistent with the above standards. This would require coordination of treatments between stands in order to achieve parcel or drainage-wide goals for distribution of age, size, stocking, and structure characteristics.
- 10) Until updated references are developed, the guidelines from DNRC Silvicultural Treatment Standards and Guidelines (draft dated 2/91), or other appropriate technical references, would be used as needed for guidance to implement these standards.

Monitoring

- 11) Monitoring procedures and information would be used to:
 - monitor the effectiveness of completed silvicultural treatments at meeting treatment objectives;
 - identify promptly the need for follow-up treatments in order to meet treatment objectives and environmental commitments;
 - provide information for improving the effectiveness of future silvicultural practices; and
 - identify potential improvements to the Silvicultural Treatment Guidelines.
- 12) A regeneration survey would be completed promptly enough to ensure that treatment objectives and environmental commitments were met, in all stands where a regeneration cut has been applied.

- 13) In all planted stands, a survival survey would be completed the first fall after planting.
- 14) Stand evaluations would be scheduled and conducted prior to each scheduled entry and after each completed treatment. Evaluation methods and intensity would be sufficient to provide information necessary for developing appropriate silvicultural prescriptions and for determining treatment results in terms of the prescribed objectives.
- 15) Information on the dates and types of completed treatments and activities would be maintained for each stand.
- 16) Information on revenues and costs would be maintained for all treatments.
- 17) A record would be maintained of all conditions and events that occur during the course of treatment that have a significant potential to affect the treatment outcome.
- 18) On selected sites, soils effects would be monitored for implementation of mitigation measures and effectiveness to guide future harvest practices.

ROAD MANAGEMENT

Standards

Transportation Planning

- 1) DNRC would plan the transportation system for the minimum number of road miles. DNRC will only build necessary roads, that is, those needed for current and near-term management objectives, as consistent with the other resource management standards. Roads would be built to the minimum standard necessary to avoid unacceptable adverse impacts, and best meet current and future management needs and objectives. We would evaluate and use alternative transportation systems that do not require roads whenever possible.
- 2) Transportation planning would be conducted as part of landscape-level evaluations. An evaluation of existing and possible future transportation systems would be conducted prior to road location and design. These items would be considered:
 - a) The relationship of access routes and road systems on adjacent sections (regardless of ownership). Managers would plan systems cooperatively with adjacent landowners to minimize road construction.
 - b) Existing and probable future management needs of the tributary area, such as coordination of state needs with adjacent ownership needs, public access, cable vs. tractor logging, TSI activities, fire protection, and wildlife habitat protection.
 - c) Value(s) of resources being accessed for the proposed project as well as resources to be accessed from future roading or extension of transportation system.

Road Location and Design

- 3) The location, design, construction and maintenance of all roads would be consistent with Best Management Practices (BMPs), Streamside Management Zone (SMZ) rules, Watershed Standards, other State Land Resource Standards, and the conditions of all appropriate permits.
- 4) For roads outside Streamside Management Zones, we would locate and design new roads if reconstruction and use of existing roads would produce greater undesirable impacts than new construction. For roads inside SMZs, we would refer to the Watershed Resource Management Standards.
- 5) Road management activities would comply with applicable DNRC weed management plans for prevention, revegetation, and management.

DNRC STATE FOREST LAND MANAGEMENT PLAN

- 6) DNRC would locate and design roads to require a relatively low level of maintenance.

Road Construction

- 7) Contract specifications and administration of construction projects would be sufficient to ensure roads were built as designed to meet resource protection requirements.

Road Maintenance

- 8) Maintenance would be scheduled and funded commensurate with expected continued road use and appropriate resource protection. Drainage structures and other resource protection measures would be maintained on restricted as well as open roads.
- 9) Adequate maintenance requirements, proportional to road use, would be included in all agreements for granting and acquiring right-of-way, and those requirements would be enforced on the ground.

Road Closures

- 10) DNRC would plan road density to meet landscape level ecosystem plans and other Resource Management Standards. DNRC would determine road density to meet Threatened and Endangered Species, Big Game, Sensitive Species, and Biodiversity Resource Management Standards, as well as road surface protection and other resource needs.
- 11) On roads which are deemed non-essential to near-term future management plans, DNRC would emphasize obliteration through revegetation and slash obstruction. This would minimize maintenance costs and erosion and to enhance road closure and effectiveness, while leaving the capital investment intact. Determination of which roads to obstruct would be made during project level analysis. In the Swan River State Forest, road closures would be planned in accordance with terms of the February 23, 1995 Swan Valley Grizzly Bear Conservation Agreement with the U.S. Fish and Wildlife Service, the U.S. Forest Service, and Plum Creek Timber Company, L.P.

Monitoring

- 12) Contract administration would be the primary form of monitoring. The stipulations and requirements contained in Environmental Assessments would be incorporated into contracts and enforced by contract administrators. Deficiencies would be corrected using standard contract enforcement provisions.
- 13) Qualitative assessments, such as BMP audits, would include an assessment of roads, and would be conducted as time allowed and appropriate sites were available. Findings of the audits would be incorporated into future project planning and contracting.

- 14) Road maintenance would be monitored by contract administrators in connection with timber sales or repair contracts. Deficiencies would be corrected using standard contract enforcement provisions.
- 15) Road maintenance would be monitored by direct inspections of road and drainage condition of both open and closed roads every five years. Maintenance operations would be scheduled based on the results of the inspections.
- 16) Existing road systems would be inspected by DNRC specialists when they review proposed timber sales and other projects. This would provide monitoring for road planning, construction, and maintenance, and give an opportunity for correction of problem areas by incorporating corrective measures into future project plans.
- 17) Road closure structures, such as gates and kelly humps, would be inspected as part of on-going administrative duties and in response to notice of road closure violations received from the public. If road closures are violated in sensitive areas (as defined by the Resource Management Standards for Threatened and Endangered Species, Big Game, and Sensitive Species), DNRC would evaluate and consider alternative methods of closure. Inspections would occur at least every five years. Repairs would be a high priority when allocating time and budget.

References - Road Management

Road Management Standards and Guidelines, review draft #5, provides guidelines for meeting these standards and the specifications for road activities.

Streamside Management Zone Law and Rules, and Best Management Practices for Forestry in Montana provide the primary resource protection information for implementation of these standards.

WATERSHED2

Standards

General

- 1) DNRC would manage watersheds, soil resources, and streams, lakes, wetlands, and other bodies of water to maintain high quality water that meets or exceeds state water quality standards, and to protect designated beneficial water uses.
- 2) DNRC would comply with all laws and regulations pertaining to water resources when conducting or permitting activities on state-owned forest lands.
- 3) An inventory and analysis of watershed impacts would be conducted on state-owned forest land as funding allowed. The analysis would be sufficient to identify causes of watershed degradation and set priorities for watershed restoration. DNRC would emphasize mitigation of existing water quality impacts in order to provide greater opportunities to produce trust income while maintaining beneficial uses.

Best Management Practices

- 4) All management activities would incorporate Best Management Practices (BMPs) into the project design and implementation. BMPs appropriate for a given project or situation would be determined during project development and environmental analysis. The source document for minimum standard BMPs would be "Best Management Practices For Forestry In Montana".

Cumulative Watershed Effects

- 5) Projects involving substantial vegetation removal or ground disturbance would require an assessment of cumulative watershed effects. The analysis would ensure that the project, considered with other existing and proposed activities, would not increase impacts beyond the physical limits imposed by the stream system for supporting its most restrictive beneficial use. The analysis would identify opportunities, if any existed, for mitigating adverse effects on beneficial water uses.

2 **PLEASE NOTE THAT THE WATERSHED RMS FOR OMEGA PRESENTED IN THE FEIS WERE, IN PART, INCORRECT. WE HAVE CORRECTED THIS ERROR HERE. AS SUCH, THE WATERSHED RMS PRESENTED IN THIS RECORD OF DECISION ARE FINAL AND WILL BE IMPLEMENTED AS WRITTEN HERE.**

- 6) The level of cumulative watershed effects analysis would be dependent on the extent of the proposal, the level of past activity, and the watershed values at risk. Watersheds would be screened in a step-wise process, which would include three levels.

Level 1 -- Screening is a broad evaluation of physical parameters, beneficial uses, and potential for impacts. Based on the information assembled, the analysis would stop at the first level, or proceed to the next level. Except for small-scale projects with very low potential for impacts, additional analysis would be required.

Level 2 -- Preliminary Watershed Analysis would involve documenting history of past activities through the use of maps, aerial photography, and harvest records; developing indices of watershed disturbance, such as area harvested, length of road, and number of stream crossings; and conducting field evaluations of stream channels and watershed condition. Based on these results and the values at risk, the analysis might stop or proceed to the third level.

Level 3 -- Detailed Watershed Analysis A detailed watershed analysis would be needed when screening or preliminary analysis predict or indicate the existence of unacceptable cumulative watershed effects. The type of watershed analysis varies and would be determined on a case-by-case basis. The detailed analysis might include comprehensive field evaluations, model simulations of watershed response to disturbance, and other indicators of cause and effect relationships. The methods used will attempt to quantify the potential effects of the proposed activity on downstream water resource values.

- 7) Threshold values for cumulative effects would be established by DNRC on a watershed basis, taking into account such items as stream channel stability, beneficial water uses, and watershed condition. Threshold values would be set at a level to ensure protection of beneficial water uses with a low to moderate degree of risk. On the Stillwater, Coal Creek, and Swan River State Forests, we will establish thresholds at a level to ensure protection of beneficial water uses with a low degree of risk due to the blocked ownership, sensitive watershed values and past commitments.
- 8) DNRC would cooperate with other landowners in watersheds with mixed ownership to manage cumulative watershed effects within prescribed thresholds.

Streamside and Riparian Management Standards

- 9) DNRC would manage Streamside Management Zones (SMZs), riparian areas, and wetlands in a manner that complied with appropriate laws and regulations and protected and maintained water quality and beneficial water uses. Adequate measures for protecting water values would be of primary importance.
- 10) SMZ width would be dependent on erosion potential, level of disturbance proposed, and beneficial uses of the stream. We would use the following table as a guide for determining SMZ width.

TABLE 1
Guide For Minimum Recommended SMZ Width
(slope distance each side of stream)

SLOPE	SOIL ERODIBILITY CLASS		
	HIGH (4X)	MEDIUM (3X)	LOW (2X)
5%	50 FT.*	50 FT.*	50 FT.*
15%	60 FT.	50 FT.*	50 FT.*
30%	120 FT.	90 FT.	60 FT.
>50%	200 FT.	150 FT.	100 FT.

*Use minimum width when formula results equal < 50 ft.

Modify SMZ width based on topographic breaks.

- 11) Timber harvest in SMZs along streams containing bull trout will be prohibited, unless approved by a fisheries biologist (see Fisheries RMS #8). Trees would be retained in the SMZ as prescribed in the SMZ rules. Multiple entries that would result in less than 50 percent of the pre-harvest stand would not be allowed except in salvage situations.
- 12) DNRC would use plant species composition, soil characteristics, or depth of water table to identify wetlands. A 50 ft. wide equipment restriction would be applied around isolated wetlands greater than one-quarter acre. Equipment would not be operated in wetlands unless the operation would not cause rutting or displacement of soil and shrubs and submerchantable trees would be protected.
- 13) Existing roads in SMZs would be used if potential water quality impacts are adequately mitigated. The economic and watershed implications of relocating roads outside the SMZ would be primary considerations.

Rehabilitation

- 14) DNRC would rehabilitate or mitigate the adverse effects of fire, flood, and other natural or management-related events, as funds were available. We would apply erosion control to damage incurred as a part of fire suppression. The DNRC Wildfire Rehabilitation Policy would provide guidance.
- 15) For development activities, DNRC would ensure that adequate reclamation plans and bonds are included in approved plans of operation. Such plans and bonds would have to address the costs of removing facilities, equipment, and materials; recontouring disturbed areas to

near pre-disturbance topography; isolating and neutralizing or removing toxic or potentially toxic materials; salvaging and replacing topsoil; and preparing seedbed and revegetating.

Fire Management

- 16) DNRC would locate incident bases, camps, helibases, staging areas, helispots, and other centers for incident activities outside of the SMZ.
- 17) DNRC would use suppression methods that result in the least disturbance possible in the SMZ. We would consider the potential adverse effects of fire suppression and the potential adverse effects of wildfire damage to determine appropriate suppression activities.

Monitoring

- 18) Contract administration would be the primary form of compliance monitoring. The stipulations and requirements contained in Environmental Assessments and project contracts would be periodically evaluated by contract administrators. Deficiencies would be corrected as they were observed by the contractor, under supervision of DNRC.
- 19) Qualitative assessments, such as BMP audits, would be conducted on most projects with a substantial amount of soil disturbance. Problems noted would be remedied by DNRC. BMPs that failed to provide adequate protection would be revised for future application.
- 20) DNRC will develop a monitoring strategy to assess watershed impacts of land use activities and the effectiveness of mitigation measures. The protocol will be distributed for external peer review followed by Land Board review.
- 21) If monitoring indicates watershed impacts from management activities, or other activities such as grazing, mining, cabinsites or recreation, problems would be corrected. The information collected would be used to identify the need for mitigation measures and the need to modify future activities to avoid similar impacts.
- 22) The impacts of land management on the physical soil properties would be evaluated using quantitative methods on a representative sample of sites. The information collected would be used to identify the need for mitigation measures and the need to modify future activities to avoid similar impacts.
- 23) DNRC would continue to participate in cooperative monitoring efforts, such as the Flathead Basin Commission's Monitoring Plan and the Flathead Basin Forest Practices and Fisheries Cooperative Program Final Report recommendations (see Fisheries RMS #2).
- 24) Upon request, monitoring data will be made available to the public. DNRC will compile the results of monitoring into a report for the Land Board by October 2000 and every 5 years thereafter.

References - Watershed

- Cline, Richard, G.Cole, W.Megahan, R.Patton, J.Potyondy. 1980. Guidelines for predicting sediment yields. USFS R-1 & R-4.
- Flathead Basin Commission. 1991. Flathead Basin forest practices water quality and fisheries cooperative program final report. Kalispell, MT.
- Hansen, Paul L.,R.D. Pfister, K. Boggs, B.J. Cook, J. Joy, and D.K. Hinckley. 1995. Classification and management of Montana's riparian and wetland sites. Montana Forest and Conservation Station, School of Forestry, University of Montana, Missoula, MT. Miscellaneous Publication No. 54.
- Kootenai National Forest Plan. 1991. Riparian area guidelines - timber harvest guidelines within streamside management zones. USDA Forest Service Kootenai National Forest Appendix 26. Libby, MT.
- Montana Department of State Lands. 1991. Wildfire rehabilitation policy. Revised June 1991.
- Montana Environmental Quality Council. 1989. Best management practices for forestry in Montana. July 1989.
- Pfister, Robert D., K.Sherwood, D.F.Potts, and P.L.Hansen. 1991. Delineating streamside management zones for Montana forests. In: Flathead Basin forest practices water quality and fisheries study cooperative. Flathead Basin Commission. Kalispell, MT.
- Thomas, Jack W., M.G. Raphael, et al. 1993. Viability assessments and management considerations for species associated with late-successional and old-growth forest of the Pacific Northwest. The Scientific Analysis Team Report.
- USDA Forest Service. 1974. Forest hydrology part II - hydrologic effects of vegetative manipulation. Missoula, MT.

FISHERIES

Standards

- 1) DNRC would coordinate with MDFWP in the design and implementation of projects that might affect fisheries resources through compliance with the Stream Preservation Act (§ 87-5-501, MCA).
- 2) Land management activities in the Flathead Basin would be designed to protect bull trout and westslope cutthroat trout habitat by meeting the recommendations of the Flathead Basin Cooperative Study. See "Flathead Basin Forest Practices and Fisheries Cooperative Program Final Report" Recommendation #17. Land management activities in areas outside of the Flathead Basin would be managed to sustain and enhance bull trout, westslope and Yellowstone cutthroat trout, and all other designated "sensitive" species and Species of Special Concern, where applicable.
- 3) Impacts to fisheries habitat would be minimized by implementing Resource Management Standards and Forestry Best Management Practices (BMPs), and by complying with the Streamside Management Zone Law and other laws and regulations.
- 4) DNRC would construct, reconstruct, and maintain road crossing structures on existing and historic fish-bearing streams to provide for fish passage.
- 5) Silvicultural treatments adjacent to fish bearing streams would prescribe for steady entry of pool-forming trees into the stream system. The number and type of trees would depend on specific site conditions and the needs of the individual fisheries.
- 6) Fisheries designated as "sensitive" or Species of Special Concern (SOSC) would be managed so as to comply with any additional, and possibly more restrictive, direction as specified in the Sensitive Species Resource Management Standards.
- 7) DNRC would cooperate with other agencies to eliminate non-native fish stocking, over fishing, and poaching.
- 8) DNRC would implement the Immediate Actions described in Pat Flowers' memo of 12/5/94 to NWLO and SWLO area managers as interim measures to protect bull trout habitat, as recommended by the Governor's Bull Trout Restoration Team.

Monitoring

- 9) In conjunction with land management activities, DNRC would monitor fisheries habitat conditions in areas identified as critical bull trout and westslope cutthroat trout habitat in the Flathead Basin as prescribed in the "Flathead Basin Forest Practices and Fisheries Cooperative Program Final Report," Recommendation #17.

- 10) Contract administration would be the primary form of project monitoring. The stipulations and requirements contained in Environmental Assessments and project contracts would be periodically evaluated by contract administrators. Deficiencies would be corrected by the contractor, as they are observed, under supervision of DNRC.
- 11) Compliance with Watershed and Grazing RMS would be treated as important indicators of fisheries protection.

Summary of Flathead Basin Forest Practices and Fisheries Cooperative Program Recommendation #17.

Recommendation #17 provides for protection of bull trout (BT) and westslope cutthroat trout (WSCT). Protection measures include:

- Cooperate in obtaining more complete information on fish species composition in drainages where management activities are planned.
- Management recommendations for bull trout spawning and rearing areas and migratory westslope cutthroat trout spawning areas:
- For "threatened" streams, take active precautions to minimize new sediment loading, and ameliorate past disturbances contributing sediment.
- "Threatened" stream criteria: fine material in spawning gravel >35% (BT & WSCT) or substrate score (measure of embeddedness) <10 (BT only).
- For "impaired" streams, assure that no additional sediment loading occurs as a result of new land disturbance, and stabilize all sediment sources from past activities.
- "Impaired" stream criteria: fine material in spawning gravel >40% (BT & WSCT) or substrate score <9 (BT only).

Summary of Bull Trout Immediate Actions

The Governor's Bull Trout Restoration Team has developed interim recommendations for protection of bull trout. These "Immediate Actions" will eventually be replaced by basin-level plans. DNRC has committed to the following:

- Conduct surveys to determine presence/absence of bull trout in streams adjacent to proposed management activities, where existing information is lacking.
- As part of our pre-sale analysis in drainages containing bull trout, conduct sediment source surveys and initiate remedial measures for identified sources.
- Discontinue timber harvest and cattle grazing in SMZs along streams containing bull trout, unless specifically approved by a fisheries biologist.
- Carefully conduct road maintenance activities to keep wastes from entering waters containing bull trout.
- All proposed fisheries and land management activities in drainages containing bull trout should be reviewed and modified as necessary to have no negative impact to bull trout. This is done through implementation of the Immediate Actions, BMPs, SMZ law, 124 permits, MEPA analysis and interdisciplinary design.

- All land management entities should have fisheries biologists and hydrologists involved in the development and review of proposed management actions. Hydrologists and soil scientists review and help design management practices. Fisheries biologists will be consulted as needed.

References - Fisheries

Flathead Basin Commission. 1991. Flathead Basin forest practices water quality and fisheries cooperative program final report. Kalispell, MT.

Montana Department of Fish, Wildlife and Parks. 1994. Internal Memo, September 9. Immediate Actions (for Bull Trout Restoration). Larry Peterman, Administrator, Fisheries Division.

Montana Department of State Lands. 1994. Internal Memo, December 5. Immediate Actions for Bull Trout Restoration. Pat Flowers, Chief, Forest Management Bureau.

Thomas, Jack W., M.G. Raphael, et al. 1993. Viability assessments and management considerations for species associated with late-successional and old-growth forest of the Pacific Northwest. In: The scientific analysis team report.

THREATENED AND ENDANGERED SPECIES

Standards

- 1) DNRC would participate in recovery efforts of threatened and endangered plant and animal species. We would confer with the U.S. Fish and Wildlife Service to develop habitat mitigation measures. These measures might differ from Federal management guidelines because we play a subsidiary role to Federal agencies in species recovery. However, in all cases, measures to support recovery would be consistent with our responsibilities under the Endangered Species Act and under Trust Law.

DNRC would work with the U.S. Fish and Wildlife Service to amend such measures when, in the judgement of the Chief of the Forest Management Bureau, they were inconsistent with trust management obligations. Measures to support species recovery would be periodically updated to implement new biological information and legal interpretations as warranted.

- 2) DNRC would participate on interagency working groups that have been established to develop guidelines and implement recovery plans for grizzly bears, bald eagles, and wolves. If additional plant or animal species with habitat on state forest land were listed as threatened or endangered, we would participate in working groups for those species as well. DNRC would also participate in interagency groups that may be formed to oversee management of any recently delisted species.

In the Swan River State Forest, DNRC would adhere to the set of Management Guidelines contained in the February 23, 1995 Swan Valley Grizzly Bear Conservation Agreement with the U.S. Fish and Wildlife Service, the U.S. Forest Service, and Plum Creek Timber Company, L.P.

Monitoring

- 3) Contract administrators would monitor compliance with all requirements indicated in project environmental analyses. If contract requirements were not being met, they would be corrected by the contractor, under DNRC supervision.
- 4) DNRC specialists and field staff would report all sightings of T&E species, except bald eagles, to DNRC wildlife biologists, who would then forward the information to the respective working groups for inclusion in a cooperative data base. For bald eagles, only new nest locations need be reported because the Montana Bald Eagle Working Group monitors nesting success of all nests in the state each year.
- 5) DNRC would participate in annual monitoring and reporting of implementation of the Management Guidelines in the Swan Valley Grizzly Bear Conservation Agreement.

References - Threatened & Endangered Species

The following guidelines developed by interagency working groups or Federal agencies, in coordination with the U.S. Fish and Wildlife Service, would serve as the primary references for protecting threatened and endangered species. The Forest Management Bureau Wildlife Biologist would provide any additional guidance needed to implement these guidelines.

Forest Management Bureau. 1995. Interim Grizzly Bear Guidance. Northern Continental Divide Ecosystem Project Mitigation and Analysis. Missoula, MT.

Conservation Agreement among Plum Creek Timber Company, L.P., and Montana Department of Natural Resources and Conservation, U.S.D.A. Forest Service, Flathead National Forest, and U.S. Fish and Wildlife Service, February 23, 1995 ("Swan Valley Grizzly Bear Conservation Agreement").

U.S. Fish and Wildlife Service. 1993. Grizzly bear recovery plan. Missoula, MT.

Montana Bald Eagle Working Group. 1986. Montana bald eagle management plan. BLM-MT-GI-86-001-4352.

Paige, C., B. Madden, and B. Ruediger. 1991. Habitat management guide for bald eagles in Northwestern Montana. Montana Bald Eagle Working Group.

U.S. Fish and Wildlife Service. 1987. Northern Rocky Mountain wolf recovery plan. Fish and Wildlife Enhancement Office, Helena, MT.

U.S. Fish and Wildlife Service. 1984. American peregrine falcon recovery plan (Rocky Mountain/Southwest populations). Prepared in cooperation with the American peregrine falcon recovery team. U.S. Fish and Wildlife Service, Denver, CO.

SENSITIVE SPECIES

Premise

We recognize that certain plant and animal species, both terrestrial and aquatic, are particularly sensitive to human activities in managed forests. Populations of such species are usually small and/or declining, and thus continued adverse impacts from land management activities may lead to their being Federally listed as threatened or endangered. Further, because sensitive species usually have specific habitat requirements (tending to be ecological specialists rather than generalists), consideration of their needs is recognized as a useful and prudent "fine filter" for ensuring that we meet our primary goal, namely maintenance of diverse and healthy forests. By considering sensitive species in our management actions, we help to ensure that: 1) we are making decisions appropriate to our fundamental philosophy; and 2) additional Federal listings will not be necessary.

Standards

Fundamental Approach

- 1) We would manage so as to generally support populations of sensitive species on state land. This policy would be pursued by managing for site characteristics generally recognized as important for ensuring long-term persistence. Localized adverse impacts could be accepted, but only within the context of an overall strategy of supporting habitat capability for these species.
- 2) For sensitive plant species, important sites and/or site characteristics would be protected with mitigation measures applied to management activities that would likely have substantial long-term impacts.
- 3) For sensitive animal species, we would provide habitat characteristics recognized as suitable for individuals to survive and reproduce in situations where land ownership patterns and the underlying biological and geographical conditions allow for them. Our contribution toward conservation of wide-ranging animal species that occur in low densities and require very large areas to support self-sustaining populations would be supportive of, albeit subsidiary to, the principal role played by Federal agencies with larger land holdings.
- 4) For sensitive animal species, we would, for all proposed projects, look for opportunities to provide for habitat needs primarily through managing for the range of historically occurring conditions appropriate to the sites. In blocked ownerships, in addition to considering habitat needs generally, we would consider such issues as connectivity and corridors. In scattered ownerships, we would not necessarily commit to providing all the life-requisites of individual members of sensitive species, particularly if adjacent land-owners managed in ways to limit the potential for individuals on our lands to be part of functional populations.

- 5) For sensitive animal species, the Forest Management Bureau would provide guidance for managing so as to support these populations. Such guidance would use a hierarchical procedure to identify lands by their appropriateness for providing habitat needs of each listed sensitive species.
- 6) We would refer to databases maintained by the Montana Natural Heritage Program (MNHP) or the U.S. Forest Service for information on occurrence of plant species of special concern prior to conducting planned land management activities. Where lists or other information indicate potential for sensitive plant species and their habitat to occur within the project area field surveys and/or consultation with qualified professionals may be required to determine the presence, location, and mitigation measures for the sensitive plant species.
- 7) The Forest Management Bureau Chief would maintain a list of sensitive animal species, which would be specific to each Land Office. To generate and modify this list, we would rely principally on information and classification systems developed by the USDA Forest Service, the MNHP, and the Montana Department of Fish, Wildlife and Parks (for fish species only). Listing by Land Office would be based on the general geographic distribution and habitat affinities of the animal species, and would not require site-specific evidence of presence on state land. Additions to, or deletions from this list, of any animal species not already categorized as "sensitive" by Forest Service Region 1, or as "fish species of special concern" by MDFWP, would require written justification. We would not routinely conduct site-specific surveys for the presence of sensitive animal species.

Monitoring

- 8) DNRC specialists and field staff would continue to report all observations of sensitive plant and animal species to the MNHP.
- 9) On DNRC projects with identified sensitive plant species, sites identified as important would be monitored to assess implementation of mitigation measures. On selected DNRC projects with listed sensitive animal species, periodic follow-up surveys would be conducted to assess how well management actions have provided for site conditions needed to support those populations. In both cases, deficiencies would be documented and used to guide future management actions and mitigations.

References - Sensitive Species

Project field staff may reference the Montana Heritage Program, and other agency botanists for information on plant occurrence, life cycle and habitat requirements.

Remington, D. 1993. Biological diversity strategies for forest type groups, landscape planning process. Montana Department of State Lands.

USDA Forest Service. 1989. Caring for the land. USDA Forest Service Region One Threatened, Endangered, and Sensitive Species Program.

BIG GAME

Standards

- 1) DNRC would promote a diversity of stand structures and landscape patterns, and rely on them to provide good habitat for native wildlife populations.
- 2) To the extent possible, we would manage to provide for big game habitat. Measures to mitigate potential impacts would be implemented if they are consistent with overall management objectives, and with the Biodiversity Resource Management Standards.
- 3) The current elk and white-tailed deer management standards and guidelines drafted November 1989 would no longer be adopted as Department policy.
- 4) DNRC would consult with MDFWP to determine which big game habitat values are most likely to be affected by proposed management actions and would cooperate with MDFWP to limit detrimental impacts to big game.

Monitoring

- 5) Mitigation efforts described in the project MEPA document, or other record, would be incorporated in sale or lease contracts. Contract administrators would monitor compliance with contract requirements related to big game habitats, as described in environmental documents. Deficiencies would be corrected or mitigated by the contractor, under DNRC supervision.
- 6) Biodiversity monitoring procedures, described in the Biodiversity Resource Management Standards, would be used to track the health of forest ecosystems. This process would be used as the primary indicator of the health of wildlife populations using these ecosystems. When necessary, corrective actions would be taken as described in the monitoring section of the Biodiversity Resource Management Standards.

References - Big Game

- Remington, D. 1993. Biological diversity strategies for forest type groups. Montana Department of State Lands unpublished paper.

GRAZING ON CLASSIFIED FOREST LANDS

Standards

- 1) Grazing licenses (classified Forest lands) and grazing leases (forested classified Grazing lands) would specify the number of animal unit months (AUMs), kinds of livestock, and grazing period of use. Lease/license stipulations would be set at the time of lease/license renewal.
- 2) Lessees and licensees would have primary responsibility for developing and maintaining range land improvements. They would also be responsible for maintaining or improving range sites by managing livestock grazing and utilization in a manner that would produce a stable or upward trend in range condition. DNRC would support rangeland improvements through technical and financial assistance, as workload and budget allow. Rangeland improvements could include riparian management, weed control, prescribed burning, water developments, grazing management systems, fencing, and conversion of forest edge ecotones to grassland. Cost-sharing for improvements between the lessee/licensee and the state would be accomplished through an addendum to the lease/license. The addendum would stipulate terms and conditions by which the lessee/licensee may be required to reimburse the state for improvement expenses incurred.
- 3) Stocking rates would be estimated by visual assessment of existing vegetative plant species composition. Estimated species composition by weight per range site would be compared to potential (climax range condition) for a specific range sites. The following references, published by the USDA Soil Conservation Service, would serve as technical guides: "Guides for Determining Range Condition and Initial Stocking Rates"; Range Site Criteria; and "Guides to Determine Forest Understory Vegetation Condition and Recommended Stocking Rates". Range site would be determined by soil characteristics, topography, climate, and professional judgement.
- 4) Livestock management practices would be designed to prevent unacceptable loss of streambank vegetation and structural damage to streambanks that results in nonpoint source pollution. Practices would be designed to: (1) improve or restore both herbaceous and woody species to a healthy and vigorous condition and facilitate the ability of vegetation to reproduce and maintain different age classes in the desired riparian-wetland plant communities; and (2) leave sufficient vegetation biomass and plant residue (including woody debris) to provide for adequate sediment filtering and dissipation of stream energy for bank protection.
- 5) Mineral, protein, and other supplements would be placed so as to maximize animal distribution away from riparian areas. Holding facilities would be placed outside of riparian areas.
- 6) Continuous season-long grazing would be authorized with the level of forage utilization not to exceed 60 percent and healthy riparian function maintained.

Monitoring

- 7) a) At renewal (every 10 years), leases/licenses would be evaluated for the following: range condition; plant species composition; riparian browse utilization; and streambank disturbance.
- b) Leases/licenses would be evaluated at mid-term (every 5th year) for the following: riparian browse utilization; streambank disturbance; and an ocular assessment of tract condition with notations for potential concerns or problems.
- c) Range condition would be evaluated using standard USDA Soil Conservation Service methods and recorded on a DNRC Field Evaluation Form. Browse utilization would be measured using standardized survey methods, such as the Cole Browse Survey Method (Patton and Hall, 1966) or a modified version of Evaluating Health of Riparian Areas on the Charles M. Russell National Wildlife Refuge (Cook, et al., 1993) to measure form class of shrubs or percent riparian vegetation utilization, respectively. No shrubs would be in the heavily hedged form class and less than 25 percent of the shrubs would be in the moderately hedged form class. In addition, streambank disturbance induced by livestock trampling would be limited to less than 10 percent alteration per 500 feet of streambank.
- d) Areas that showed resource damage greater than the prescribed limits would be mitigated or rehabilitated by the lessee, with technical assistance from DNRC. If improved management did not resolve the damage, adjustments in the license or lease would be used to facilitate rehabilitation efforts.

WEED MANAGEMENT

Standards

- 1) Forested state lands would be managed to prevent or control the spread of noxious weed. We would comply with the weed management law by inventorying noxious weed occurrences, developing management plans, and allocating funds for weed control projects.
- 2) DNRC would submit general revegetation plans to county weed boards for their review of land-disturbing projects such as road construction associated with timber harvest. We would promptly revegetate with site-adapted grasses that emphasize native species.
- 3) In areas where weeds are widespread across state and adjacent ownerships DNRC would cooperate with weed districts for control projects across all ownerships.
- 3a) We would use an integrated pest management approach for noxious weed control in accordance with HB 395 (§ 2-22-2151, MCA, as amended 1995) including cultural, biological and chemical methods as appropriate.
- 4) We would promote prevention of weed spread by requiring a combination of measures such as, use of weed-free equipment, prompt revegetation of roads, and reduction of ground disturbance.
- 5) Stipulations and control measures to limit the spread of weeds would be attached to timber sale contracts. Where specified, weed control efforts would continue for two years following land disturbance.
- 6) Herbicide treatments would be limited to areas where herbicide offers the most cost effective means of control, and where biological and mechanical control measures are ineffective. New outbreaks of noxious weeds and locations where native plant communities are threatened by noxious weed encroachment would have first priority for control. Large areas of weed infestation may be limited to perimeter weed containment.
- 7) On unleased lands, DNRC would be responsible for weed control.
- 8) A lessee or licensee of state land would be responsible for weed control as outlined in Surface Management Rules 26.3.156. The lessee or licensee must provide weed control at his cost and must comply with the Montana County Weed Management Act.
- 9) All right of way and special use agreements would require the permittee to control weeds in association with the permittee's use. This may include fees charged for weed control.
- 10) On sites where weeds are introduced by recreation use, a portion of recreational access fees would be available for weed control.

Monitoring

- 11) On DNRC projects where weeds were a concern, field staff and specialists would review implementation of noxious weed control and mitigation measures. Deficiencies would be remedied.
- 12) Whenever field reviews were made, DNRC staff would inventory and map all infestations of noxious weeds on grazing leases/licenses. Lessees/ Licensees would be notified of the weeds and could be required to enter into a supplemental lease agreement (SLA) which outlines specific control measures. In order to ensure an integrated approach, county weed staff may be contacted to assist in developing these weed control measures.
- 13) On sites where a SLA outlines weed control remedies, DNRC would make follow-up reviews as necessary, to ensure the control measures are completed. Failure by the lessee to perform any of the terms stipulated in the SLA would result in cancellation of the lease.

C. Management Direction

In the EIS, we identified 13 issues raised by the public and other agencies based on responses to press releases and our initial public mailing, and affirmed by a series of public meetings. Some of these issues are addressed through Resource Management Standards (RMS) for Biodiversity, Silviculture, Road Management, Watershed, Fisheries, Threatened and Endangered Species, Sensitive Species, Big Game, Grazing on Classified Forest Lands, and Weed Management.

The remaining issues, while not included in the Resource Management Standards, are addressed as follows:

Access - Public's Right to Use State Lands

- General recreational use (currently defined as including non-commercial and non-concentrated hunting, fishing and other activities determined by the land board to be compatible with the use of state lands; general recreational use does not include the use of streams and rivers by the public under the stream access law provided in Title 23, Chapter 2, Part 3.) would be allowed on legally accessible lands with the purchase of a Recreational Use License.

Access - Right-of-way Across State Forest Lands

- Proposals for rights-of-way would be considered subject to management constraints, workload and environmental review. Compatibility with our management goals would be an important factor in approval of right-of-way requests.

Access - Acquiring Access to State Land

- Access would be secured to state lands when specific projects were proposed. When possible, we would obtain permanent access to state lands.

Administrative Coordination

- In addition to our current level of cooperation with other land owners, we would attempt cooperative ecosystem management planning.
- We would be actively involved in community-based planning efforts where appropriate.
- We would favor land exchanges that improved our flexibility to manage for a variety of trust revenue opportunities.

Cumulative Environmental Effects

- We would evaluate cumulative effects and pursue cooperative agreements to share the responsibility of mitigation among landowners.
- In some cases we may accept significant individual resource impacts if the activity would result in greater overall ecosystem integrity and greater long-term revenue potential. (e.g., wildlife security may be reduced to promote natural vegetation conditions)
- We would pursue ecosystem management, and other agreements with adjoining land owners to achieve mutual landscape goals.

Conflicting Land Uses

- We would consider adjusting our management activities so they are compatible with adjacent lands, when doing so is consistent with the general philosophy of the alternative.
- We would coordinate activities with adjacent landowners on a case-by-case basis.
- When conflicts did occur, we would consider covenants or conservation licenses as long as the trust was adequately compensated. These covenants or licenses may not fully comply with the biodiversity elements of this alternative. However, because we expect these other income opportunities to occur on a minor amount of the forest acreage, these uses would not compromise the overall fundamental premise of managing for biodiversity.

Public Involvement and Planning

- Public participation efforts would conform to current MEPA rules. The degree of public involvement would be project-specific and vary by public interest and uncertainty of, or potential for, significant impacts. Proposed projects would be modified to address public concerns to the extent consistent with our trust obligations. Site-specific management decisions would be made at the most local level possible.

Recreational Opportunities

- General recreational use (currently defined as including non-commercial and non-concentrated hunting, fishing and other activities determined by the land board to be compatible with the use of state lands; general recreational use does not include the use of streams and rivers by the public under the stream access law provided in Title 23, Chapter 2, Part 3) would be allowed on legally accessible lands with the purchase of a Recreational Use License.
- Cabinsites would continue to be leased and new ones developed where appropriate.
- We would develop recreational opportunities as guided by the changing markets for new and traditional uses. These land uses may not comply with the biodiversity elements of this alternative. However, because we expect these other income opportunities to occur on a minor amount of the forest acreage, and such site-specific changes in use will be subject to further environmental review, these uses would not compromise the overall fundamental premise of managing for biodiversity. These activities would only be pursued where the revenue potential exceeds that of current use or complements the current use.

D. Categorical Exclusions

By process of this programmatic review, pursuant to ARM 26.2.643(5)(a), DNRC, Trust Land Management Division, is authorized to adopt the following additional categorical exclusions for activities conducted on state forest lands. "Categorical Exclusion" refers to a type of action that does not individually, collectively, or cumulatively require an EA or EIS unless extraordinary circumstances occur (ARM 26.2.642(5)).

The following list of categorical exclusions includes extraordinary circumstances when the categorical exclusion will not apply. Extraordinary circumstances include the general extraordinary circumstances listed in Chapter V of the FEIS in addition to those described in the individual categorical exclusions. The categorical exclusions include activities on state forest lands conducted by others under authority from the Department as well as activities conducted by the Department itself.

- 1) Temporary Uses with Negligible Effects - Minor temporary uses of land involving negligible or no disturbance of soil or vegetation and having no long-term effect on the environment, provided that federally listed Threatened and Endangered species are not likely to be present in the immediate area during the time of use.
- 2) Plans and Policies - Plans or modifications of plans adopted or approved by the Department that would not essentially pre-determine future individual department actions affecting the physical or biological environment.
- 3) Leases and Licenses - The issuance, renewal, or assignment of a lease or license of land when the uses of the land authorized under the lease or license will remain essentially the same.
- 4) Acquisition of Land or Interest in Land - Acquisition of fee title, easements, rights-of-way, or other interests in land that does not tend to commit the Department to other actions.
- 5) Road Maintenance and Repair - Maintenance and repair of existing roads that are open to motorized use by the public, unless the road has become impassable to highway vehicles.
- 6) Bridges and Culverts - Reconstruction or modification of an existing bridge on essentially the same alignment, or replacement of a culvert, including temporary diversion or channelization of the stream, if done in accordance with all applicable state and federal laws and regulations and with best management practices to minimize sedimentation.
- 7) Crossing Class 3 Streams - Crossings of "class 3 stream segments" by means of culvert, bridge, ford, or other means, in accordance with best management practices. "Class 3 stream segment" means a portion of a stream that does not support fish; normally has surface flow less than six months of the year; and rarely contributes surface flow to another stream, lake, or other body of water (ARM 26.6.601).

- 8) Temporary Road Use Permits - Issuing permits for temporary use of existing roads designated as open to motorized public use.
- 9) Road Closure - The closure of existing roads including installation of gates, berms, debris, or other facilities necessary to close existing roads to motorized public use.
- 10) Boundaries - Surveying, posting, and painting landline boundaries.
- 11) Material Stockpiles - Removal of materials that have been stockpiled from previous excavation.
- 12) Backfilling - Filling of earth into previously excavated land with material compatible with the natural features of the site.
- 13) Gathering Forest Products for Personal Use - Gathering small quantities of forest products for personal use, such as firewood, Christmas trees, or posts.
- 14) Regeneration - Regeneration of an area to native tree species, through planting or other means, including site preparation that does not involve the use of herbicides or result in conversion of the vegetation type.
- 15) Nursery Operations - Seed procurement, growing, lifting, and distributing nursery stock, and associated non-chemical disease and pest control.
- 16) Water Wells - Drilling of water wells for domestic use and for irrigation of lawns and gardens for existing cabinsites or home sites.
- 17) Herbicides and Pesticides - Herbicide or pesticide treatments, done in accordance with registered label instructions and uses, for control of pests or nuisance vegetation, using spot applications on less than 160 acres within a 640-acre section, during a calendar year.
- 18) Other Hazardous Materials - The handling of hazardous materials for fire suppression or other purposes (e.g., fuel for a helicopter seeding project) when done according to specifications of the U. S. Department of Transportation, state and federal regulations, and label specifications.
- 19) Fences - Fence construction to improve livestock distribution (which may include cutting minor amounts of live timber), if the fence is no more than 42 inches high and the bottom wire is at least 16 inches from the ground.
- 20) Waterlines - Installation of water pipelines to improve livestock distribution or otherwise benefit grazing allotments.
- 21) Removal of Small Trees - Mechanical removal of trees less than two feet tall that are encroaching on range or non-commercial forest lands, on up to 60 contiguous acres, not to exceed a total of 160 acres within a 640-acre section, during a calendar year.

VI. PROJECT RECORD

The Project File containing additional information used in the preparation of the EIS is located and available for public review at the Department of Natural Resources and Conservation, Forest Management Bureau, 2705 Spurgin Road, Missoula, Montana.

VII. SIGNATURE OF DECIDING OFFICIAL:

ARTHUR R. CLINCH
Director, Department of Natural Resources and Conservation

May 30, 1996