

ENVIRONMENTAL ASSESSMENT

Management Indicator Species Forest Plan Amendment

to the Land and Resource Management Plan for the Grand Mesa, Uncompahgre and Gunnison National Forests

Lead Agency	March, 2005
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INTRODUCTION

The current list of Management Indicator Species in the (GMUG) Land and Resource Management Plan (Forest Plan) includes the following:

- Mule Deer
- Elk
- Bighorn Sheep
- Rainbow Trout
- Brown Trout
- Black Bear
- Abert's Squirrel
- Pine Marten
- Hairy Woodpecker
- Red Crossbill
- Goshawk
- Lewis' Woodpecker
- Sage Grouse
- Pinyon-Jay
- Peregrine Falcon
- Bald Eagle
- Colorado River Cutthroat Trout

The Forest Service proposes to develop a reduced list of MIS. In the scoping the proposed revised MIS list included:

- Elk
- Abert's Squirrel
- Brewers Sparrow
- Goshawk
- Pine Marten
- Common Trout

Following public comment and further consideration the Forest Service now proposes the following to be MIS until a new Forest Plan is developed on the GMUG:

- Elk
- Mule Deer
- Abert's Squirrel
- Brewers Sparrow
- Goshawk
- Juniper (Plain) Titmouse
- Pine Marten
- Common Trout

LEGAL CONTEXT

The purpose of this Environmental Assessment (EA) is to disclose the environmental impacts of the proposed action and alternatives to the proposed action, and to provide the deciding official with the information necessary to make an informed decision. The decision would be documented in a Decision Notice to be issued following public comment on this EA.

This chapter of the EA describes the proposed action, the purpose and need for the action, the decision to be made, the public involvement process, and the issues identified to be considered in the analysis. This introduction provides background information on Management Indicator Species (MIS).

IN THIS DOCUMENT:

GMUG stands for Grand Mesa, Uncompahgre and Gunnison National Forests;
MIS stands for Management Indicator Species as defined in 36 CFR 219 (1982 Rule);
36 CFR 219 refers to the 1982 National Forest Management Act Regulations, unless specified otherwise.

The 1982 planning regulations provided guidance for implementation of the National Forest Management Act when the Forest Plan was promulgated in 1983, and amended in 1991. The 1982 regulations have now been superseded by regulations published in the Federal Register on January 5, 2005 (“the new rule”). 70 Fed. Reg. 1022. The new rule only addresses forest planning and has no application to project level planning. 36 CFR 219.2(c). The new rule expressly drops the 1982 rule’s concept of wildlife viability and the related requirement to monitor management indicator species. However, during a three-year transition period, the new rule allows amendment of an existing Forest Plan under the provisions of the superseded 1982 rule with certain modifications. 36 CFR 219.14.

The 1982 rule directed forests to manage fish and wildlife habitat to maintain viable populations and directed forests to select MIS as a process or method to help ensure species viability. 36 CFR 219.19 (1982 rule).

MIS were defined as “*plant and animal species, communities, or special habitats selected for emphasis in planning, and which are monitored during forest plan implementation in order to assess the effects of management activities on their populations and the populations of other species with similar habitat needs which they may represent*” (FSM 2620.5). The role of MIS and the criteria to select MIS are described in 36 CFR 219.19 (a)(1) (1982 Rule) as follows:

“In order to estimate the effects of each [Forest Plan] alternative on fish and wildlife populations, certain vertebrate and/or invertebrate species present in the area shall be identified and selected as management indicator species and the reasons for their selection will be stated. These species shall be selected because their population changes are believed to indicate the effects of management activities. In the selection of management indicator species, the following categories shall be represented where appropriate: Endangered and threatened plant and animal species identified on State and Federal lists for the planning area; species with special habitat needs that may be influenced significantly by planned management programs; species commonly hunted, fished or trapped; non-game species of special interest; and additional plant or animal species selected because their population changes are believed to indicate the effects of management activities on other species of selected major biological communities or on water quality.”

Important characteristics of MIS are that they have narrow habitat associations and are capable of being effectively monitored. MIS and their habitats have been used as part of a strategy to monitor implementation of the Forest Plan and the effects to wildlife and plants.

Deciding officials have broad discretion to select MIS under the 1982 regulations. The deciding official, using information provided by an interdisciplinary planning team, determines whether the population changes of certain species are “*believed to indicate the effects of management activities.*” Beliefs or opinions about the reliability of such relationships are subject to change because of increased scientific knowledge, and as a result of implementation and monitoring of Forest Plans. Therefore, deciding officials may periodically need to reevaluate the MIS selected for forest plans and make appropriate adjustments. Furthermore, the regulations specify that species are to be selected from various categories “*where appropriate*”, indicating there is no requirement that all categories of species or habitats be represented.

As a final note of introduction, we observe that both the concept and application of MIS have come under considerable criticism. Growing doubts about the usefulness of the concept and/or its application are reflected in the literature (Caro and O’Doherty 1999; Landres, Verner, and Thomas 1988; Noss 1990; Simberloff 1998).

The new rule modifies the MIS concept during transition to the new rule, at 36 CFR 219.14(f):

(f) Management indicator species. For units with plans developed, amended, or revised using the provisions of the planning rule in effect prior to November 9, 2000 [the 1982 Rule], the Responsible Official may comply with any obligations relating to management indicator species by considering data and analysis relating to habitat unless the plan specifically requires population monitoring or population surveys for the species. Site-specific monitoring or surveying of a proposed project or activity area is not required, but may be conducted at the discretion of the Responsible Official.

This language explicitly relieves the Forest Service of obligations regarding monitoring or survey of wildlife populations of MIS but none-the-less does retain reference to MIS developed in Plans prepared using the 1982 Planning rule.

While the 1982 rule has been superseded and no longer exists, the Forest has elected to conduct this amendment under the provisions of the former 1982 rule, as modified by 36 CFR 219.14.

§219.14 Effective dates and transition.

(a) Effective dates. A plan, plan amendment, or plan revision is effective 30 days after publication of notice of its approval (§219.9(b)), except when a plan amendment is approved contemporaneously with a project or activity and applies only to the project or activity, in which case 36 CFR part 215 or part 218, subpart A, apply.

(b) Transition period. For each unit of the National Forest System, the transition period begins on January 5, 2005 and ends on the unit’s establishment of an EMS in accordance with §219.5 or on January 7, 2008 whichever comes first.

(e) Plan development, plan amendments, or plan revisions previously initiated. Plan development, plan amendments, or plan revisions initiated before the transition period may continue to use the provisions of the planning regulations in effect before November 9, 2000

(See 36 CFR parts 200 to 299, Revised as of July 1, 2000), or may conform to the requirements of this subpart, in accordance with the following:

(1) The Responsible Official is not required to halt the process and start over. Rather, upon the unit's establishment of an EMS in accordance with §219.5, the Responsible Official may apply this subpart as appropriate to complete the plan development, plan amendment, or plan revision process.

The transition rule allows for use of the provisions of the 1982 rule for the limited purpose of plan amendment or revision during the transition period. This amendment is prepared using the MIS concept of the transition rule.

Background information, including relevant definitions, requirements to include an appropriate MIS list in a Forest Plan, and the 1982 regulations and guidance describing the rationale/criteria in selecting species as MIS, are found in [Appendix B](#).

The new planning rule limits its application to planning at the Forest-wide level and imposes no requirements on project decisions which implement the forest plan. 36 CFR 219.2(c). The new rule also allows a forest that elects to amend during the transition period to remove any mandatory MIS population monitoring from the plan. 36 CFR 219.14(f). Accordingly, this amendment imposes no obligation to collect population data and imposes no obligation to collect or analyze data regarding MIS at the project level.

THE PROPOSED AMENDMENT

The proposal is to amend the Forest Plan (approved 1983: major amendments 1991, 1993), to modify the Forest's MIS list and update the Forest's monitoring and evaluation plan. The specific language of the existing Forest Plan (affected pages) and of the Proposed Amendment is found in [Appendix A](#).

The Forest Service has conducted a review of the 17 MIS species with the intent of identifying a more appropriate MIS list. A synopsis of this evaluation, including rationale for the selection of the species, is included as Appendix E. Listed in [Appendix D](#) are the 17 species currently designated as MIS in the Forest Plan, as well as the 6 proposed as part this Forest Plan amendment, and the 8 now identified as the Preferred Alternative.

As a result of this review, five species and a species group (common trout) were proposed as MIS, rather than the currently listed 17 species. The Forest also proposed to establish ecological indicators for snags/down wood and riparian areas in lieu of MIS for these habitat types. Also, as part of the refinement of the use of MIS, monitoring and data gathering protocols for selected MIS and ecological indicators would be developed as direction outside the Forest Plan.

It is anticipated that further modifications to the MIS list may occur in the ongoing revision of the Forest Plan. This proposed amendment is an interim measure deemed necessary until the completion of Forest Plan revision.

PURPOSE AND NEED FOR THE ACTION

This amendment responds to a need for a more suitable and manageable list of MIS, while maintaining a sufficient number of species to meet the intent of the regulation for listing them. Monitoring of both the Forest Plan overall, and of individual projects, in addition to recent policy changes and judicial interpretations, has led to the conclusion that the Forest Plan provisions related to MIS and MIS monitoring are in need of reconsideration.

In the 1983 Forest Plan, 17 wildlife species were selected as MIS for use on the Forest to evaluate the effects of implementing the Forest Plan. Since the selection of the original 17 MIS and approval of the Forest Plan in 1983, there have been advancements in MIS knowledge and application. Several of these species do not respond to the criteria for selecting MIS. Many are essentially impossible to survey or monitor on a meaningful basis, and several MIS do not truly indicate a narrow range of habitat. Some selected MIS in the current Forest Plan do not respond to direct habitat changes locally but rather are influenced by many other factors. And, finally, the Forest Service has determined that current monitoring requirements are not effective, and do not reflect contemporary technical and scientific knowledge or research findings.

SCOPE OF THE ACTION

The scope of the action has been narrowed to a review and amendment of the MIS list, modification of Management Area (MA) Direction for Management Area 4B, and to review and amendment of Monitoring requirements specific to MIS. The scope of the action does not include a species viability assessment or an evaluation of sustainable commodity outputs as these topics will be addressed in Forest Plan Revision.

Substantive direction for the management of areas designated 4B in the Forest Plan has been modified only as much as is required to preserve the management intent for wildlife in these areas while accommodating the proposed reduced list of MIS. Management emphasis, and objectives, will be on the same species in those areas following this amendment as before.

DECISION TO BE MADE

The decision to be made is whether or not to amend the Forest Plan to modify the existing MIS list, management direction in MA 4B, and the monitoring and evaluation requirements found in the Forest Plan (Chapter IV). Following public comment the responsible official's decision will be documented in a Decision Notice, which will include a summary of the findings disclosed in this EA and the rationale for the decision made. The Decision Notice will also address whether or not implementing the action would create a significant change in the Forest Plan in terms of NFMA significance in accordance with Forest Service Manual 1922.5 and Forest Service Handbook 1909.12 Chapter 5. Direction applicable to this significance determination is included in this EA as [Appendix C](#).

PUBLIC INVOLVEMENT

On October 13, 2004, an interest/preliminary scoping letter was sent to approximately 1300 individuals, agencies, and organizations on the GMUG Forest Plan Mailing list. This letter described the purpose and need for the action, and included a table of existing MIS and the retention/removal recommendations. In this scoping letter, notice was given that the opportunity to comment for this scoping period would extend through November 15, 2004, with the additional information that, “While we will accept and consider comments at any time during this analysis process, to be most helpful and to be fully considered in the analysis and decision process comments should be received by that date.”

In addition a news release was sent to all newspapers with distribution in the area of the GMUG, summarizing the proposed amendment and inviting public review and comment.

Through the scoping process, thirteen written responses were received. One of these, from High Country Citizens Alliance, representing several other organizations, described numerous concerns with the proposed MIS list modification and a Forest Plan Amendment. The remaining responses offered either general support for modifying the MIS list or support to retain and/or remove individual species as recommended.

ISSUES

Because this is not a site specific project, or a proposed action which results in direct impacts to land or resources, issues to be considered in the decision process are not the more usual statements of concern such as “effects on soil”, or even “effects on wildlife”. Comments received during scoping were more directed to advice to the Forest Service for factors to consider as we deliberate the selection of MIS, and as we implement monitoring and evaluation.

Recited below is a brief summary of comments received during scoping. Written comments received are a part of the administrative record for this action, and are available for public review.

Ouray Trail Group

- Add lynx and Uncompahgre fritillary butterfly to MIS list

Monarch & Associates – John Monarch

- Shift from MIS to “focal species”
- Problem with selecting
 - Elk – do not have “narrow habitat associations”
 - Trout – because they can be and are stocked

Sue Navy

- Add Gunnison sage grouse to MIS list
- Use species for snags/down wood and riparian areas, not just “conditions”

John Trammel

- Colorado River Cutthroat Trout should not be lumped with common trout

Bill Day

- Supports proposed list. Says RMBO transects provide these data....
- GMUG should have at least one species of MIS for EACH major habitat type

- They should be obligate species for each habitat type
- Suggests:
 - **elk**
 - **Horned lark and American pipit** – for Alpine tundra
 - **American marten** – for spruce fir
 - Possible birds of hermit thrush and ruby crowned kinglet – for spruce fir
 - **northern goshawk**
 - **Red napped sapsucker** – for cavity nesters in aspen climax
 - NO NEED FOR lodgepole,
 - Add purple martin or tree swallow, but they prefer edges
 - Flamulated owl for aspen
 - **Abert’s squirrel** – good for ponderosa but, **Pygmy nuthatch** – for ponderosa (used by other Forests)
 - **Virginia’s warbler** is common obligate for mountain shrub
 - **Black throated gray warbler and juniper titmouse** – for pinyon juniper
 - **Brewers sparrow** first choice for sage
 - Song sparrow and yellow warbler for mid elevation riparian
 - Lincoln’s sparrow and Wilson’s warbler for high elevation riparian
 - Willow flycatcher for willows
- Bolded species above are first choice. All of the birds except goshawk are commonly found in RMBO transects and are closely tied to one habitat type.
- Oldgrowth is BEST indicator of all species that associate with certain forest types
- Likes riparian and snag conditions as indicators better than anything else.

Gunnison Energy Corporation and Oxbow Mining

- Supports reduced list
- Supports use of “best available science” instead of population data

WCC

- Agree with reduce list
- Need species for Gamble oak/mountain shrub, for alpine tundra, for limber pine
- Species associated with cover types should be associated with the old growth of that vegetation type
- How will ecological indicator condition for riparian allow for assessment of viability of species associated with those veg types?

Delta County

- Support reduced list

Intermountain Forest Association

- Supports new list

Melanie Son

- Add “mixed conifer/spruce fir” to cover types with species represented
- Add turkey to MIS list

Tom Peace

- Should be significant Forest Plan amendment
- Goshawk is too rare to be of use
- Vesper sparrow is more common, more tame and more tolerant of human presence, and so better to use than Brewers

Deb Paulson

- Pinyon juniper obligates are pinyon jay (but mobile and hard to monitor)
- Better: Blackthroated grey warbler, juniper titmouse – for mature pinyon juniper
- Grey flycatcher for open woodland
- Goshawk is NOT an obligate of aspen, red napped sapsucker is better for mature aspen, and easier to monitor

High Country Citizens Alliance

- The Forest Service should prepare an EIS
- The proposed list would violate NFMA by failing to designate MIS for several cover types. MIS should be included for limber pine/bristlecone pine, alpine tundra, mountain shrub, Douglas-fir, fen, cliff and cave communities.
- The proposed list would not account for differences between early and late succession vegetation types.
- The proposed list would violate NFMA by substituting ecological indicators for MIS. The Forest Service should add species that rely on snags and down wood for forage and cover as MIS.
- The proposed list is insufficient to allow the Forest Service to understand the impacts of transportation and ORV use on affected cover types. Biological soil crusts would be a good choice.
- The proposed MIS list does not address the complete range of affected cover types for each management action.
- The proposed MIS list does not address the complete range of management actions contemplated in the Forest Plan; such as hunting, fishing, visitor use, pest and fire management, utility corridors, ski area expansions and developed recreation sites.
- The Forest Service should designate habitat specialists when possible.
- The Forest Service must consider designating plants as MIS.
- The Forest Service should consider designating exotic species to monitor the success of control and prevention efforts.
- The Forest Service has not yet provided a specific rationale for removing species from the MIS list.
- The Forest Service must articulate extensive monitoring requirements as required under NFMA.

These comments in their more detailed form have been considered in the preparation of this EA. An additional comment period will be provided following release of this EA, and further comments provided will be considered in coming to a final decision.

ALTERNATIVES

ALTERNATIVE 1 – NO ACTION

The No Action Alternative represents the existing Forest Plan management situation for the GMUG. See [Appendix A](#). The MIS listed in the Forest Plan and the monitoring and evaluation requirements for those MIS (Chapter IV) would remain intact during the interim Forest Plan Revision period. There would be no change to the management direction, outputs, or the monitoring and evaluation section of the Forest Plan. Implementing this Alternative would not involve preparing a Forest Plan Amendment.

ALTERNATIVE 2 - PROPOSED ACTION

The proposed action (as proposed in scoping) is to modify, through a Forest Plan Amendment, the existing MIS list. This modification would retain 6 MIS and 2 ecological indicators for monitoring and evaluation, rather than the existing 17 species. Again, see [Appendix A](#) for specific language changes to the Forest Plan. If this Alternative is selected for implementation, the existing monitoring and evaluation requirements found in the Forest Plan (Chapter IV-6) would rely upon additional information outside the Forest Plan to clarify procedures, timelines and/or protocols required to monitor MIS. Monitoring procedures would include the collection and evaluation of quantitative population data as well as data to assess trends in habitat capability¹. Specific changes to wording as they would appear in the Forest Plan Amendment are included in [Appendix A](#).

This action would modify the existing MIS list by retaining six species for monitoring and evaluation. Specifically the proposed species for use as MIS would be as follows:

- Elk
- Abert's Squirrel
- Brewers Sparrow
- Goshawk
- Pine Marten
- Common Trout

Implementation of the proposed action would apply to all projects planned and authorized on the GMUG.

ALTERNATIVE 3 – PREFERRED ALTERNATIVE

As a result of public and inter- /intra-agency comments received during scoping, it was suggested that the rationale behind retaining or removing certain species be reevaluated. Based on further review and consideration the proposed MIS list was further refined, and is represented in this Preferred Alternative.

¹ "To insure that viable populations will be maintained, habitat must be provided to support, at least, a minimum number of reproductive individuals and that habitat must be well distributed so that those individuals can interact with others in the planning area." 36 CFR 219.19

This action would modify the existing MIS list by retaining eight species for monitoring and evaluation. Specifically the proposed species for use as MIS would be as follows:

- Elk
- Mule Deer
- Abert's Squirrel
- Brewers Sparrow
- Goshawk
- Juniper (Plain) Titmouse
- Pine Marten
- Common trout

In addition, the use of ecological indicators as a surrogate for MIS would not be incorporated as part of a specific amendment to the plan. This was criticized in comments received during the scoping period. The focus of this amendment is MIS. Use of ecological indicators in monitoring and for project analysis is not required in law, regulation, policy or direction, but is a tool which may be used as appropriate. There is no need to prescribe this use in the form of an amendment to the Plan.

All other aspects of alternative 2 would be the same, including language changes. Again, see [Appendix A](#) for these specific language changes to the Forest Plan. If this Alternative is selected for implementation, the existing monitoring and evaluation requirements found in the Forest Plan (Chapter IV-6) would rely upon additional information outside the Forest Plan which would clarify procedures, timelines and/or protocols required to monitor MIS. Monitoring procedures would include the collection and evaluation of quantitative population data as well as data to assess trends in habitat capability².

If approved, implementation of this action would apply to all projects planned and authorized on lands managed on the GMUG.

ALTERNATIVE NOT CONSIDERED IN DETAIL

The development of the list of MIS for consideration entailed extensive research into both the legal and biological foundations of the use of the MIS concept, and into the suitability of numerous species to be considered as MIS. Appendices B and E provide summaries of these deliberations/considerations.

Alternative lists of species for consideration could be generated ad infinitum, but were not. Rather, a careful job was done of identifying a meaningful and appropriate list for further consideration as the proposed action, and then one alternative was developed following scoping.

² "To insure that viable populations will be maintained, habitat must be provided to support, at least, a minimum number of reproductive individuals and that habitat must be well distributed so that those individuals can interact with others in the planning area." 36 CFR 219.19

AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

Following is a description of the affected environment and the environmental consequences of implementing Alternatives 1, 2, and 3. The following would occur with implementation of any of the alternatives:

- there would be no anticipated changes to the goals and objectives, or outputs of the Forest Plan (see “Scope of the Action” above);
- the direct, indirect, and cumulative effects of the alternatives would not differ from those disclosed in the 1983 Final Environmental Impact Statement (FEIS) for the Forest Plan;
- implementing any of the alternatives would not dictate, result in or propose any ground-disturbing activities.

AFFECTED ENVIRONMENT

The environment affected by the alternatives includes all National Forest System lands on the GMUG National Forests. However, implementing any of the Alternatives does not propose or dictate any ground-disturbing activities. Therefore, the environmental consequences of implementing the Alternatives focuses on: 1) direction and guidance relative to MIS, wildlife habitat diversity and population viability based on current regulations and Regional guidance, ([Appendix B](#)); 2) the existing MIS list of 17 different species across GMUG’s four units ([Appendix D](#)); and 3) supplemental information and/or data as summarized in [Appendix E](#) .

Since the selection of the original 17 MIS and approval of the Forest Plan in 1983, and Amendment in 1991, there have been advancements in MIS knowledge and application, including a Region 2 clarification (Hayward et al. 2001 and 2004) of the selection criteria found in NFMA at 36 CFR 219.19(a)(1). Based on this clarification, and upon more recent understanding of the purpose and use of MIS, the GMUG has reviewed the 17 species on the existing MIS list. The goal was to determine the usefulness of each species as a MIS and the feasibility of monitoring population trend for each based on species biology, available methodologies, feasibility and effectiveness. The outcome was a recommendation to modify the MIS list by retaining 6 of the original 17 species, and in addition to monitor ecological indicators for riparian and down wood/snag habitats.

Rationale for these recommendations is found in [Appendix E](#).

ENVIRONMENTAL CONSEQUENCES

The fundamental conclusion of the analysis of this proposed change to the Forest Plan is that there will be no environmental effect. There will be no effect to species, or habitats, or to populations of wildlife. The proposed action is essentially an administrative change in how we monitor and report aspects of management, and how we evaluate potential effects of site-specific projects. This constitutes no change in emphasis, or direction related to ground

disturbance, habitat management or any other aspect of active management that would lead to an environmental effect. This EA, and discussions that follow below, are being used as a vehicle to record and disclose considerations in this matter, and to solicit and consider public comment.

ALTERNATIVE 1 – NO ACTION

Direct and Indirect Effects

Management activities proposed and implemented on the GMUG would continue to utilize MIS from the existing list ([Appendix D](#)) as a means to assess the effects of those activities on the viability of species and accomplishment of Forest Plan objectives. Monitoring and evaluation of MIS would continue to be based upon the original goals of the Forest Plan, with a strong focus on habitat trends. The HABCAP model (USDA-FS 1994), a standard analysis tool used by Forest Service biologists, has and continues to be effective in predicting potential impacts of vegetation change on habitat capability. Data generated from HABCAP have been supplemented with quantitative population monitoring data provided by State wildlife agencies or other entities, and by population monitoring. Because the Forest Plan's General Direction/Standards and Guidelines (S&Gs) (Chapter III) focus on habitat capability most project analyses and associated monitoring have and are expected to continue utilizing habitat trends to assess the effects of management activities on species viability. Adhering to the MIS monitoring and evaluation requirements of the Forest Plan (Chapter IV-6) would continue the focus on habitat capability assessments and periodic population estimates.

When the Forest Plan was approved in 1983, the MIS direction was believed to be in full compliance with NFMA (1982 Regulations 36 CFR 219.19). Following years of Forest Plan implementation, a review of the existing MIS has indicated the need to remove certain species from the list based upon the criteria and guidelines used in selecting species as MIS. One of the reasons supporting a species removal from the list was that it does not serve a valid role as an indicator of the effects of management activities or ecosystem change. Implementing the No Action alternative would retain all existing species on the MIS list, even if they no longer meet the selection criteria.

Legal interpretations of NFMA indicate that MIS habitats, populations and population trends must be monitored at the Forest scale. Therefore, under the No Action Alternative, the GMUG would be required to monitor habitat and populations for a large number of species that provide little useful information regarding the effects of management activities on species populations or their habitats. This required monitoring of all existing MIS would result in unnecessary expenditures and effort, and would be contrary to the NFMA requirement for establishing and maintaining a MIS list. In many instances meaningful or accurate survey of MIS of currently listed MIS is technically difficult, or infeasible, and very expensive, and even so leads to not better understanding of cause and effect of management on these species. The result is also the delay or postponement of projects, and the failure of the Forest Service to produce goods and services it is directed by Congress to provide.

Monitoring efforts at scales larger than the Forest (Planning Area) scale (i.e. section or province level) would be utilized when necessary and when inferences can be made about the relationship between trends at larger scales and those at the Planning Area scale.

There would be no direct or indirect effects or impacts to Region 2 sensitive species and or any other Federally-listed threatened, endangered, proposed, and candidate species from implementing this No Action Alternative. Federally-listed, proposed and candidate species, and Region 2 sensitive species would continue to receive special management emphasis according to current Forest Service policy (FSM 2670) and in compliance with the Endangered Species Act of 1972, as amended through review and consultation with the U.S. Fish and Wildlife Service project by project.

This No Action Alternative would not provide advanced knowledge or application of MIS that would be useful during Forest Plan Revision.

Cumulative Effects

In this analysis, the cumulative effects were estimated from the time the Forest Plan was approved (1983) and through 2006. The following are the past, present, and reasonably foreseeable actions in the Planning Area pertinent to this No Action Alternative:

- approval of the 1983 Forest Plan and subsequent Forest Plan monitoring reports;
- past, on-going and proposed management activities;
- pending Forest Plan Revision for the Forests, scheduled for completion in 2006.

Since 1983, the GMUG has been applying MIS direction and guidelines for the species on the existing list. Over the years, the evaluation of monitoring data and scientific literature for MIS has shown there are species on the list that no longer serve or may never have served as good indicators of management activities. MIS monitoring and evaluation efforts have continued, and the Forest Plan has been and is being implemented through project-level decisions. Maintaining the status quo is not effective, efficient or feasible in meeting MIS requirements of NFMA under the 1982 Regulations, or in measuring our success in achieving the goals and objectives of the Forest Plan.

The reasonably foreseeable future actions have the potential to interact with the No Action alternative in the following ways:

- The risk of implementing future project-level decisions would be minimal provided that existing MIS are chosen to indicate the effects of management activities on species populations and habitat. Achieving the goals and objectives of the Forest Plan along with the anticipated outputs would continue.
- If Forest Plan Revision timelines deviate from the proposed timelines, the existing MIS list would remain as is for a longer, undefined period of time. The likelihood of realizing an accelerated timeline for either Forest Plan Revision is unlikely. This would mean continuing to implement the MIS program of monitoring and evaluating all 17 species for this undefined period of time. By maintaining the status quo, critical resources would continue to be diverted to MIS monitoring and evaluation efforts that do not produce meaningful results related to Forest Plan implementation and/or species viability.
- Under the NFMA 1982 regulations (36 CFR 219.19), a new MIS review conducted in conjunction with each Forest Plan Revision event would likely result in a change to the existing list of species. The revised list of MIS, based on the five selection criteria found at 36 CFR 219.19(a)(1), would comprise a list of species that are

effective, feasible and would be useful indicators of the effects of management activities on population viability.

ALTERNATIVE 2 – PROPOSED ACTION

Direct and Indirect Effects

The minimum habitat capability requirements for all MIS, and species direction for specific MIS, are shown as General Direction and Management Area (MA) direction in the Plan (Chapter III) as S&Gs. These are also displayed in [Appendix A](#). Under this Alternative, changes in the management direction (goals, objectives, S&Gs), Appendix A, would produce no change in the goods and services produced and would result in not change to the actual management of wildlife on this Forest. Wording of Management Prescription 4B (Optimize habitat capability for all management indicator species) shows changes to preserve the management emphasis on the same selected wildlife species in those areas, while allowing a change to the list of species for analysis and monitoring.

Species Retained - The Proposed Action Alternative retains a more useful, efficient and feasible MIS list to monitor and evaluate the effects of management activities. These species are responsive to current management issues associated with management activities (such as livestock grazing, timber harvest, fuels reduction treatments, energy development, and recreation). Under this Alternative, the Forest would monitor and evaluate the recommended 6 species and 2 ecological indicators as MIS to ensure the goals and objectives of implementing the Forest Plan continue to be achieved.

Species Removed – This Alternative recommends removing 10 of the existing MIS. Of the species removed from the MIS list, Lewis’ woodpecker, sage grouse, and peregrine falcon are Region 2 sensitive species. Populations of these species will not be placed at any greater risk due to this removal, as monitoring and management of these species as Region 2 sensitive species according to policy would continue (FSM 2670.22 and 2672.1).

The only Federally-listed, proposed or candidate species on the existing MIS list are bald eagle (threatened in the lower 48 states), and sage grouse (candidate for listing by Fish and Wildlife). Populations of these species will not be placed at any greater risk due to this removal, as monitoring and management of these species in accordance with the requirements of the Endangered Species Act would continue.

A summary of additional information and rationale for removal of these species can be found in [Appendix E](#).

For species removed as MIS, the S&Gs in the Forest Plan would not change from requiring a minimum 40% habitat capability level which is necessary “to provide for the diversity and maintenance of viable populations of all wildlife and fish species presently occurring in the planning area”.

Monitoring and Evaluation - The existing monitoring and evaluation protocols for MIS are being developed concurrently, but outside this plan amendment, to ensure continued data collection at appropriate scales (i.e. Forest/Grassland scale or at the section or province level) to assess population trends as related to the effects of management activities within the planning area. The general Forest Plan level of direction related to this is proposed as part of this amendment process. [Appendix A](#) contains the proposed wording for a Forest Plan Amendment

under this Preferred Alternative, which includes the modification to the existing MIS list, and the monitoring and evaluation requirements.

Summary – There would be no change in any goals and objectives, or commodity outputs of the existing Forest Plan. Habitat objectives and predicted trends in habitat and species populations would not change over those levels analyzed in the Forest Plan. This Proposed Action Alternative would more adequately implement and better meet the intent of the MIS program by removing those species that do not serve as useful indicators of the potential impacts of management activities in the Planning Area.

There would be no direct and/or indirect impacts to those species retained or removed as MIS, as there would be no change in management direction in terms of on the ground management.

The action of removing species from the existing MIS list would not result in a loss of viability for those species. The species that would be removed as MIS under this Proposed Action Alternative would be managed according to the general viability requirements of NFMA (36 CFR 219.19) as described in the Forest Plan’s Standards and Guidelines (Chapter III). Furthermore, viability is not a concern for any of species that would be removed as MIS.

Other direct or indirect impacts to the species removed are not expected to increase under this Proposed Action Alternative as this action does not impact or change species-specific, non-MIS related management direction or outputs. This alternative does not propose or cause any ground-disturbing activities.

Regardless of a species status as MIS, population monitoring for many game and some non-game species would continue through the Colorado Division of Wildlife (CDOW). Several other entities and agencies also track population trends of particular species or groups of species, such as the U.S. Fish and Wildlife Service, State Natural Heritage Programs, Rocky Mountain Bird Observatory, U.S. Geological Survey, university researchers, and others. The Forest Service would continue to collaborate with the State regarding habitat management for many of the MIS species, and would continue to seek the best available information on species biology and population trend from the full range of reputable sources, as needed.

Analysis of all Federally-listed, proposed, candidate, and Region 2 sensitive species would continue prior to any future project implementation through preparation of biological evaluations, as prescribed by agency manual direction (FSM 2670). Implementation of the proposed action would have no affect on Federally-listed, proposed, candidate, or sensitive species because no changes would occur in management direction, commodity outputs or analysis of these species.

While a Forest Plan Amendment under this Proposed Action Alternative would help provide information useful for Forest Plan Revision, it is not directly tied to it, and is not a necessary part of it. The modifications made through a Forest Plan Amendment can still be changed through the forest plan revision process, where additional species would be considered as MIS.

Cumulative Effects

As with the No Action Alternative, in this cumulative effects analysis the following are the past, present, and reasonably foreseeable procedural programmatic or planning actions in the Planning Area, from 1983 to 2006, that may have or are likely to affect implementation of this Alternative:

- approval of the 1983 Forest Plan and subsequent Forest Plan monitoring reports;
- past, on-going and proposed management activities;
- pending Forest Plan Revision for the Forests, scheduled for completion in 2006.

Since 1983, the GMUG has been applying MIS direction and guidelines for all species on the existing list. Over the years, the evaluation of monitoring data and scientific literature for MIS has shown there are species on the list that no longer serve or may never have served as good indicators of management activities.

The reasonably foreseeable future actions listed above have the potential to interact with the Proposed Action in the following ways:

- The effects on species viability from implementing future project-level decisions would be better assessed by utilizing MIS that are true indicators for this purpose. This would help to better determine our ability to achieve the goals and objectives, and anticipated outputs of the Forest Plan.
- The feasibility of monitoring and evaluating 6 vs. 17 MIS would be realized, thereby allowing increased focus on work (planning, implementation, monitoring and evaluation), producing more meaningful results related to implementing the Forest Plan.
- If Forest Plan Revision timelines deviate from the proposed timelines, the amended MIS list would remain intact for a longer period of time. The likelihood of realizing an accelerated timeline for either Forest Plan Revision is low. However, this recommended modified MIS list would be suitable for continued Forest Plan implementation.
- During Forest Plan Revision, a more in-depth review of the ‘then’ existing MIS list would occur. This review would consider the possible inclusion of additional and/or different species based on the five selection criteria (36 CFR 219.19(a)(1)). Any modifications may result in changes to the existing management direction and the monitoring and evaluation procedures associated with MIS. Monitoring and evaluation of these species would be effective, feasible, and the retained species would serve as useful indicators of the effects of management activities on population viability.
- It is likely that some or all of the species proposed to be retained and/or removed under this Proposed Action Alternative would be considered in revising the MIS list, thus saving analysis time in conducting a future MIS review(s) required for Plan Revisions under current NFMA regulations.

ALTERNATIVE 3 – PREFERRED ALTERNATIVE

Direct and Indirect Effects

The minimum habitat capability requirements for all MIS, and species direction for specific MIS, are shown as General Direction and MA direction in the Forest Plan (Chapter III) as S&Gs.

Under the Preferred Alternative, changes in the management direction (goals, objectives, S&Gs), Appendix A, would produce no change in the goods and services produced and would result in not change to the actual management of wildlife on this Forest. Wording of Management Prescription 4B (Optimize habitat capability for all management indicator species)

shows changes to preserve the management emphasis on the same selected wildlife species in those areas, while allowing a change to the list of species for analysis and monitoring.

Species Retained – Within the scope of the action, the Preferred Alternative retains the most appropriate list of MIS for monitoring population trends to assess the effects of management activities on species viability. Additional information and data since the release of scoping indicates that these species warrant retention as MIS. A summary of this additional information can be found in [Appendix E](#). This Preferred Alternative also addresses the comments received during scoping to retain mule deer and elk for which continued monitoring in cooperation with State wildlife agencies is feasible and effective in assessing impacts from management activities. The recommended MIS list of eight species is the most responsive to the current management issues associated with management activities on the GMUG (such as livestock grazing, timber harvest, fuels reduction treatments, energy development, and recreation) without being redundant (compare with the discussion below). Under this Preferred Alternative, the Forest would monitor and evaluate the recommended eight species as MIS to ensure the goals and objectives of implementing the Forest Plan continue to be achieved.

Species Removed – This Preferred Alternative recommends removing nine of the existing MIS, with some similarities in species and rationale with the Proposed Action Alternative. Of the species removed from the MIS list, Lewis’ woodpecker, sage grouse, and peregrine falcon are Region 2 sensitive species. Populations of these species will not be placed at any greater risk due to this removal, as monitoring and management of these species as Region 2 sensitive species according to policy would continue (FSM 2670.22 and 2672.1).

The only Federally-listed, proposed or candidate species on the existing MIS list are bald eagle (threatened in the lower 48 states), and sage grouse (candidate for listing by Fish and Wildlife). Populations of these species will not be placed at any greater risk due to this removal, as monitoring and management of these species in accordance with the requirements of the Endangered Species Act would continue.

A summary of additional information and rationale for removal of these species can be found in [Appendix E](#).

For species removed as MIS, the S&Gs in the Forest Plan would not change from requiring a minimum 40% habitat capability level which is necessary “to provide for the diversity and maintenance of viable populations of all wildlife and fish species presently occurring in the planning area”.

Monitoring and Evaluation - The existing monitoring and evaluation protocols for MIS are being developed concurrently, but outside this plan amendment, to ensure continued data collection at appropriate scales (i.e. Forest/Grassland scale or at the section or province level) to assess population trends as related to the effects of management activities within the planning area. The general Forest Plan level of direction related to this is proposed as part of this amendment process. [Appendix A](#) contains the proposed wording for a Forest Plan Amendment under this Preferred Alternative, which includes the modification to the existing MIS list, and the monitoring and evaluation requirements.

Summary - There would be no change in any goals and objectives, or commodity outputs of the existing Forest Plan. Habitat objectives and predicted trends in habitat and species populations would not change over those levels analyzed in the Forest Plan. This Preferred

Alternative is the best Alternative to fully implement and meet the intent of the MIS program by removing those species that do not serve as useful indicators of the potential impacts of management activities in the Planning Area. This Preferred Alternative reflects an improvement in the knowledge and understanding of how to implement the MIS program in a way that is practical for Forest Plan implementation.

There would be no direct and/or indirect impacts to those species retained or removed as MIS, as there would be no change in management direction in terms of on the ground management.

Analysis of all Federally-listed, proposed, candidate, and Region 2 sensitive species would continue during project implementation through preparation of biological evaluations, as prescribed by agency manual direction (FSM 2670). Implementation of the preferred alternative would have no affect on endangered, threatened, proposed, candidate, or sensitive species because no changes would occur in management direction, commodity outputs or analysis of these species.

The action of removing species from the existing MIS list would not result in a loss of viability for those species. The species that would be removed as MIS under this Preferred Alternative would be managed according to the general viability requirements of NFMA (36 CFR 219.19) and the Forest Plan's S&Gs. Furthermore, viability is not a concern for species that would be removed as MIS.

Other direct or indirect impacts to the species removed are not expected to increase under this Preferred Alternative as this action does not impact or change species-specific, non-MIS related management direction or outputs. This Alternative does not propose or dictate any ground-disturbing activities.

Regardless of a species status as MIS, population monitoring for many game and some non-game species would continue through the Colorado Division of Wildlife (CDOW). Several other entities and agencies also track population trends of particular species or groups of species, such as the U.S. Fish and Wildlife Service, State Natural Heritage Programs, Rocky Mountain Bird Observatory, U.S. Geological Survey, university researchers, and others. The GMUG would continue to collaborate with the state regarding habitat management for many of the MIS species, and would continue to seek the best available information on species biology and population trend from the full range of reputable sources, as needed.

Analysis of all Federally-listed, proposed, candidate, and Region 2 sensitive species would continue prior to any future project implementation through preparation of biological evaluations, as prescribed by agency manual direction (FSM 2670). Implementation of the proposed action would have no affect on Federally-listed, proposed, candidate, or sensitive species because no changes would occur in management direction, commodity outputs or analysis of these species.

While a Forest Plan Amendment under this Preferred Alternative would help provide information useful for Forest Plan Revision, it is not directly tied to it, and is not a necessary part of it. The modifications made through an Amendment can still be changed through the Forest Plan Revision process, where additional species could be considered as MIS.

Cumulative Effects

The cumulative effects of implementing the Preferred Alternative (Alternative 3) would be the same as those analyzed under the Proposed Action (Alternative 2).

OTHER CONSEQUENCES OR EFFECTS CONSIDERED

Summary of the Relationship Between Short-Term and Long-Term Productivity

None of the Alternatives would affect the productivity of the GMUG as compared with the current management direction, in terms of sustainability of the resources or outputs associated with them.

Prime Farmland, Rangeland, and Forest Land; Floodplains and Wetlands; Cultural Resources; Threatened and Endangered Species

There are no proposed resource disturbances. None of the Alternatives would have any effects on prime farmland, rangeland, and forestland; floodplains and wetlands; or cultural resources, Threatened, Endangered, and Forest Service Sensitive species.

Summary of Irreversible and Irrecoverable Commitment of Resources

This decision would cause no irreversible or irretrievable commitment of resources.

Civil Rights

There are no civil rights issues, and none of the Alternatives have any related effects because consideration of MIS does not affect rights protected under civil rights law.

Forest Plan Goals, Objectives, and Outputs

None of the Alternatives make any changes in Forest Plan goals and objectives or affect any Forest Plan outputs.

Management Prescriptions and Management Areas

None of the Alternatives changes management prescriptions or alter management area boundaries.

Environmental Justice

Since the early 1970's, there has been increased concern over disproportionate environmental and human health impacts on minority populations and low-income populations. Executive Order 12898 (February 11, 1994, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations) directs each federal agency "to make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low income populations."

None of the Alternatives considered in this EA has any disproportionate environmental or human health impacts on minority or low-income populations.

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