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Forest Plan Monitoring & Evaluation Report

Fiscal Year 2007

**Rio Grande National Forest,
Colorado**

Cover photograph of the Wheeler Geologic Area, part of the La Garita Wilderness, Rio Grande National Forest, where trail improvements were constructed to protect the resources in the geologic area. The Rio Grande National Forest will celebrate its 100-year anniversary on July 1, 2008. Photo by John J. Rawinski, Soil Scientist (retired).

CERTIFICATION

The Rio Grande National Forest's (RGNF or Forest) Land and Resource Management Plan (Forest Plan), approved on November 7, 1996, is a dynamic, evolving document subject to change. Monitoring of the Forest Plan is essential in evaluating its effectiveness and making necessary adaptive management changes; it has been amended five times to date. A sixth amendment is ongoing.

Overall, the 2007 monitoring & evaluation results indicate that the management of the Forest is meeting goals, desired conditions, standards and guidelines (S&Gs), and prescriptive allocations (per 36 CFR 219.12 (k)).

Recommendations for future amendments or assessments are as follows:

- Inventoried Roadless Area (IRA) mapping errors were identified in the Forest Roads Analysis Report (2004) and documented in the Rio Grande National Forest Colorado Roadless Review Taskforce Briefing Paper and presentation dated June 7, 2006. These are included in the ongoing Colorado Roadless Rule EIS analysis which is expected to be completed in 2009. That analysis may require minor corrections to the Forest Plan map and the Forest Motor Vehicle Use Maps (MVUM).
- As a result of the P.L.106-530, Great Sand Dunes National Park and Preserve Act of 2000, there is a need to correct the Forest Plan map to reflect the Park Preserve created from former National Forest lands within the Sangre de Cristo Wilderness and the newly acquired Baca Mountain Tract. The related Baca Land Exchange has been completed and the proposed Baca Mountain Tract Amendment #6 to the Forest Plan is currently undergoing an Environmental Assessment (EA) to include the newly acquired land into the Forest Plan. This amendment is being done through a joint EA with the Great Sand Dunes National Park and Preserve.
- The Forest Plan may be amended through the ongoing proposed Regional Southern Rockies Canada Lynx Amendment. This proposed amendment would incorporate lynx conservation measures through the application of revised S&Gs into the Forest Plan.
- The Forest continues to suffer from the effects of drought and epidemic-level insect infestations. The Forest continues to assess forest health conditions and may propose Forest Plan amendments to allow for necessary vegetation treatments.
- The Forest needs to re-assess the recreation standard specifying camping stay duration limits for standard consistency with other Forests in the Region.
- The Forest conducted an analysis of the Forest Plan, including the afternoon all terrain vehicle (ATV) big game retrieval direction, relative to the 2005 Travel Management Rule. The Forest found that the Forest Plan is consistent with the 2005 Travel Management Rule.

I have reviewed the annual monitoring & evaluation report for the RGNF for Fiscal Year (FY) 07. I believe that the monitoring & evaluation requirements of the Forest Plan have been met and that the decisions in the Forest Plan are still valid. I have noted and considered the recommendations for the RGNF and, after further analysis and required public notification and involvement, will implement those that I decide are appropriate.

Dan S. Dallas
Forest Supervisor

8/6/2008
Date

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INTRODUCTION AND STATUS

On November 7, 1996, the Revised Land and Resource Management Plan (Forest Plan) for the Rio Grande National Forest (RGNF or Forest) was approved by Regional Forester Elizabeth Estill. The Forest Plan establishes the management direction for all future activities, to ensure that an interdisciplinary approach is used to achieve the desired conditions described for all areas of the Forest.

This monitoring & evaluation report is based on the RGNF Monitoring Plan, as described in Chapter V of the Forest Plan for the RGNF. This report is not a list of outputs; rather, it describes conditions of the various resources on the Forest. The report is key to the concept of adaptive management (the ability to change as new information or technology is developed) and is the feedback mechanism for improved resource management. The information presented in this report will be used to determine if an amendment or revision of the Forest Plan is needed.

The organization of this report is as follows. First, there is a brief discussion of the status of the Forest Plan appeals, followed by a discussion of amendments and potential amendments. Next are monitoring requirements and results, by resource (results are called “State of the Resource”). An appendix provides a detailed summary of this past year’s monitoring results.

APPEALS

There are no outstanding appeals to the RGNF Forest Plan at this time.

FOREST PLAN AMENDMENTS

Five Forest Plan Amendments have been completed to date. One proposed amendment is underway. There are also several amendments, corrections, or other actions that have been recommended. These are outlined below.

Completed Amendments

There have been five amendments to the Forest Plan to date. A brief description of each amendment is provided below.

Amendment # 1

Twister Blowdown Management-area Prescription 3.3. This amendment provided a temporary exception to Management-area (MA) Prescription 3.3. On March 2, 1998, a Decision Notice was signed that amended the Forest Plan to allow for timber salvage harvesting on approximately 60 acres within MA Prescription 3.3 (Backcountry) in the Twister Blowdown area. The non-significant amendment changed the “no harvest” Forest Plan Standard in this prescription, so that salvage of blowdown timber could occur to reduce the risk of bark beetle infestation and spread. The timber harvest was completed and the area is again managed as backcountry. Spruce beetle monitoring is continuing in the backcountry area.

Amendment # 2

Wilderness Management Direction. The scope of Forest Plan direction for Wilderness management was limited in the 1996 revised Forest Plan due to ongoing wilderness planning efforts. It was recognized that population growth in Colorado has affected the amount and type of recreation use within the South San Juan

and the Weminuche Wilderness Area, the most visited wilderness area in the state. Forest Plan direction pertaining to the management of recreation use, changes in recreational use patterns, and preservation of the wilderness character of these areas, were reviewed. A Limits of Acceptable Change (LAC) analysis; a planning tool that enables wilderness managers to define acceptable wilderness conditions and then develop standards, guidelines, indicators, and management actions to meet acceptable conditions; was used to help formulate a Forest Plan amendment pertaining to Wilderness management direction. On August 3, 1998, a Decision Notice was signed to:

- Implement wilderness management goals for the Forest Plan,
- to change Management-area prescription definitions and locations,
- to add Wilderness Management-area prescription and Forest-wide S&Gs,
- to define thresholds and possible management actions within Wilderness when thresholds are exceeded,
- to add Wilderness monitoring requirements, and
- to add Wilderness management to the Forest Plan.

This amendment also clarified the stocking of indigenous fish in wilderness. The Forest Plan amendment and implementation of the Wilderness management direction and action items began on October 1, 1998.

Amendment # 3

Adjustment of a Botanical Special Interest Area Boundary. On June 18, 1999, a Decision Notice was signed approving the adjustment of a special interest area (SIA) boundary. The SIA was originally designed to protect a sensitive plant (Ripley milkvetch), and the adjustment was made to more accurately reflect the actual habitat of the plant. Ripley milkvetch generally grows in relatively open ponderosa pine/Arizona fescue communities (Douglas-fir may also be present and is somewhat co-dominant with ponderosa pine) where canopy coverage by all trees is less than 25 percent and where the elevation is about 9,200 feet or lower. Due to the electronic format used when revising the Forest Plan, abundant higher elevation habitat, not specifically conducive to Ripley milkvetch, was included within the SIA boundary. The analysis to support the non-significant amendment, done as a part of the November Analysis Area Environmental Assessment, resulted in reducing the acreage of the botanical SIA from 2,076 acres to 910 acres. The reduced acreage (1,166 acres) was included in a Bighorn Sheep MA Prescription (5.42). The location of the botanical SIA is to the west of Fox Creek, in the Hicks Canyon area, on the Conejos Peak Ranger District.

Amendment # 4

Timber Suitability Amendment. On March 2, 2000, a Decision Notice was signed to amend the Forest Plan to correct suitable timber lands on the RGNF. The non-significant amendment corrects omissions made between the publication of the draft and final environmental impact statements (EISs) for the revised Forest Plan. Net adjustments of acres to the suitable timber land base result in an 8.3 percent increase in suitable lands, which was determined to not be a significant change. The amendment became effective upon completion of the consultation process with U.S. Fish and Wildlife Service (USFWS) regarding the adequacy of the Forest Plan biological assessment and evaluation.

Amendment # 5

Management Indicator Species (MIS) Amendment. A Decision Notice for a non-significant amendment to the Forest Plan was signed on October 24, 2003, which designates nine management indicator species (MIS), and adds or modifies the associated S&Gs and monitoring & evaluation strategy in the Forest Plan.

Ongoing Proposed Amendments

There is one ongoing analysis to amend the Forest Plan.

Proposed Amendment # 6

Baca Mountain Tract. This proposed amendment will address the ownership and jurisdictional changes due to the P.L.106-530, Great Sand Dunes National Park and Preserve Act of 2000. Portions of the Sangre de Christo Wilderness within the RGNF became the Great Sand Dunes Preserve. The RGNF also obtained a portion of the Baca Grande Land Grant called the Baca Mountain Tract. There is a need to correct the Forest Plan map to reflect the new RGNF boundaries and to incorporate the Baca Mountain Tract into the Forest Plan. The proposed Baca Mountain Tract Amendment #6 to the Forest Plan is being analyzed in the Baca Mountain Tract/Camino Chamisa Environmental Assessment (EA), a joint EA with the Great Sand Dunes National Park and Preserve. The Great Sand Dunes National Park and Preserve, Saguache County, US Fish and Wildlife Service and Colorado Division of Wildlife are cooperating agencies in this EA.

Status of Previous Recommendations - Potential Forest Plan Amendments, Administrative Corrections, or Other Actions

- There were several recommendations for changing the wording of some of the silvicultural guidelines and for changing monitoring requirements for fish and birds in the Forest Plan. Some of these were addressed in the MIS amendment discussed above.
- There have been recommendations for correcting mapping errors in the Inventoried Roadless Area (IRA) boundaries. IRA mapping errors were identified in the Forest Roads Analysis Report (2004) and documented in the RGNF Colorado Roadless Review Taskforce Briefing Paper and presentation dated June 7, 2006. These are currently being analyzed in the ongoing Colorado Roadless Rule EIS, which may result in a correction to the roadless area maps, the Forest Plan map, and Forest Motor Vehicle Use maps (MVUM).
- The Forest Plan may be amended through the proposed Regional Southern Rockies Canada Lynx Amendment, which is ongoing. This proposed amendment would incorporate lynx conservation measures through the application of revised S&Gs into the Forest Plan.
- The Forest continues to suffer from drought and epidemic-level insect infestations. The Forest continues to assess forest health and may propose plan amendments to allow for vegetation treatments where necessary.
- The Forest needs to assess the Forest Plan recreation standard which dictates recreational stay duration limits to make the standard consistent with other Forests in the Region.
- The Village at Wolf Creek access analysis identified the need to change the scenic integrity objective (SIO) at the Wolf Creek Ski Area to make it compatible with the existing visual situation which has been highly modified due to the Ski Area development, Highway 160 and its improvements, and the Colorado Department of Transportation (CDOT) maintenance facilities.
- There also was a recommendation to update the desired conditions statement for the Ski Area.
- The Forest recently conducted an analysis to assess Forest Plan consistency with the 2005 Travel Management Rule. The analysis concluded that the Forest Plan, including the afternoon ATV big game retrieval direction, is in compliance with the 2005 Travel Management Rule.
- A recommendation has been made to incorporate the terminology and definitions from the 1996 Federal Wildland Fire Management Policy Action Plan and the 1998 Wildland and Prescribed Fire Implementation Procedures Guide into the Forest Plan. This may be addressed in the Baca Mountain Tract Amendment #6.

MONITORING REQUIREMENTS AND STATE OF THE RESOURCE

Introduction

Monitoring & evaluation criteria are based on national policies, regional monitoring emphasis items, interdisciplinary-team concepts, and legal and other policy requirements. The monitoring & evaluation program asks the fundamental questions, "How are things working?'' and "What needs to be changed?" The purpose of the monitoring program is to establish a basis for periodic determination and evaluation of the effects of management practices (36 CFR 219.11(d)). The criteria include the following:

- Goals, objectives, and desired conditions identified in the Forest Plan,
- Forest management direction,
- Land suitability,
- MA prescriptions, as well as the Forest-wide and MA-specific S&Gs,
- The monitoring plan and,
- Congressional recommendations

Annual monitoring goals are described in the annual monitoring operation plan (AMOP) detailing monitoring expected to be completed in the upcoming year.

Three types of monitoring are described for Forest management:

- **Implementation Monitoring.** This includes periodic monitoring of project activities to determine if they have been designed and carried out in compliance with Forest Plan direction and management requirements.
- **Effectiveness Monitoring.** This level of monitoring is used to determine if management activities are effective in achieving the desired future condition described for each of the various management areas.
- **Validation Monitoring.** This level of monitoring is used to determine whether the initial data, assumptions, and coefficients used in the development of the Forest Plan are correct, or if there is a better way to meet goals and objectives and desired future conditions.

The Monitoring and Evaluation Report focuses primarily on implementation and effectiveness monitoring. It also addresses validation monitoring which involves more of a long-term analysis.

FY 2007 Monitoring & Evaluation by Resource

This section (1) briefly synopsizes the minimum level of monitoring identified for each resource component of the monitoring plan (under "Monitoring Requirements" subheading); and (2) summarizes FY 07 monitoring results for each resource component (under "State of the Resource" subheading). More detail on monitoring requirements is included in the Forest Plan (Chapter V, pp. V-4 through V-16).

Note that Forest monitoring efforts are focused on meeting these requirements; however, the amount of monitoring accomplished for each element is a function of available funding.

Air Quality

Monitoring Requirements

Maintaining air quality at a level adequate for protection and use of National Forest System resources is required by 36 CFR 219.27(a)(12). To accomplish air-quality monitoring, a number of techniques will be employed. For instance, visibility data are available from the National Park Service, which monitors visibility at the Great Sand Dunes National Park. Surveys conducted at the same time in all four wilderness areas on the RGNF have identified the lakes most sensitive to changes in acidity; these have been selected for long-term trend monitoring. Regional protocols and the Forest Air-Quality-Monitoring Plan stipulate that these lakes should be monitored three times per summer to be most effective.

State of the Resource

Air quality for the Forest is excellent and remains an outstanding feature that people come to enjoy. Long visual distances enhance beautiful scenery. Some impacts occur from burning, but are quickly dissipated by stable atmospheric conditions. Regional haze diminishes visibility; however, visual distances remain among the best in the country.

The most sensitive high-elevation lakes have been monitored in the past, but funding and emphasis for lake monitoring in 2002 was preempted by priorities given to firefighting and reclamation of the Million Burn. Monitoring resumed in 2003 and has been completed each year through 2007 with samples collected from eight established long-term sampling sites. Lake visibility and particulate data are useful in modeling to predict impacts from proposed facilities that could impact air quality. These data are also used to prescribe pollution control technology for new major polluting facilities. No additional information is available from lichen monitoring.

Aquatic Resources

Monitoring Requirements

Watershed health is a primary focus of the Forest Service, so particular emphasis will be placed on monitoring. Water-resource monitoring will include evaluation of how well streams have been protected (including stream banks, shorelines, and wetlands), and how well erosion and flood hazards have been minimized. Watershed-disturbance monitoring is expected to identify disturbances from past, present, and proposed activities; relate severity of disturbances to an equivalent roaded area; compare total disturbance to a concern level, to measure relative risk; and vary the concern level, based on existing information and experienced resource managers.

Monitoring & evaluation of stream health, water quality, and riparian conditions will be included in watershed assessments. Watershed assessments are to be completed on at least one stream and riparian area per analysis area for each environmental analysis (EA) project involving land disturbance. Monitoring of streams within watersheds that have been identified as “at risk” will occur, and be reported in, watershed assessment sections of appropriate EAs. Monitoring to evaluate improvement over time of six streams identified as damaged in the Monitoring Plan, will be reported based on long-term assessments (two streams will be evaluated each year).

State of the Resource

Monitoring has shown that watershed disturbances can increase in timber harvest areas. High levels of watershed disturbance seem to affect stream health in some areas on the Forest, but not in others. This seems to be mostly related to amount of precipitation. Areas of low precipitation, like the Saguache Ranger District, can tolerate more watershed disturbance before stream health begins to be impacted. The location of

disturbances and how they are mitigated seem to be the more important criteria for protection of stream health.

Drought conditions suffered from 1999-2004 improved in 2005 through 2007. Near normal moisture was received in much of the San Luis Valley.

"Adequate" to "robust" stream health is the norm, although the health of some streams was diminished during the drought. Range specialists continue to make adjustments in grazing systems to deal with impacts and avoid excessive concentration of animals in sensitive riparian areas that were impacted during the drought, but are now recovering. Stream health is determined by comparing channel conditions to a similar reference stream that shows what a stream can look like. Sometimes this comparison is made visually and sometimes with more, in-depth measurements.

The Wolf Creek Ski Area continues to exceed Forest Plan sediment control requirements. They have successfully stabilized steep slopes, and installed water collection systems that divert flow into sediment collection basins. They are paving parking lots to prevent sediment delivery as part of snow removal.

Access to the proposed Village at Wolf Creek continued to be evaluated. Appropriate mitigation measures to comply with the Forest Plan will be implemented if activities are approved. Long-term stream cross-sections are being established to monitor conditions over time.

Construction work on Highway 160 is a potential source of sedimentation, but sediment retention measures are a routine part of that operation. Construction work on Highway 160 has ceased for the time being.

Streams within the Million Burn continue to be in different states of adjustment. The watershed is healing nicely, but stream channels are naturally down-cutting in places while aggrading in others. Million reservoir is full again and the public has total access for recreation.

Several fuel reduction projects occurred in 2007. Stability and general condition of streams within these project areas were evaluated prior to the projects. Where necessary, channels were identified for buffering from the burns. Additional monitoring will occur subsequent to the burns to evaluate effects. The Forest also assessed stream condition for timber sale projects and range allotment renewals. Minor problems were noted in some cases and changes in management are expected to produce improvement in those areas. We also returned to some reference streams and to some long-term monitoring streams to document changes.

The Forest continued work on abandoned mine land reclamation projects that involve improving water quality and health of streams, riparian areas, and watersheds. These projects are within the Willow Creek Watershed. In addition, preliminary stream health survey work was completed by Forest and BLM personnel on Kerber Creek where remediation of mine tailings and stream improvement projects on BLM and private lands are planned to begin in 2008.

Biodiversity

Monitoring Requirements

The National Forest Management Act (NFMA) requires the RGNF Forest Plan to provide for the diversity of plant and animal communities based on the suitability and capability of the specific land area in order to meet overall multiple-use objectives (16 U.S.C. 1604(g)(3)(B). NFMA is implemented through the regulations at 36 CFR 219.19 and 36 CFR 219.27(a)(6) which require management of habitat in order to maintain species viability in the planning area (i.e., the RGNF). Thus, the Forest has a duty to harmonize multiple-use objectives with providing a reasonable certainty for species viability.

To determine if the Forest Plan is meeting this objective, the Forest uses several monitoring tools. Forest specialists will monitor those species and/or habitats about which there are some questions as to their potential viability. Species monitored are found on the Threatened and Endangered list, the Regional Sensitive Species list; and for plants, the Colorado Natural Heritage Program's list of Species of Special Concern and Significant Plant Communities. MIS are being monitored beginning in 2004.

Monitoring will occur at two different scales. The “fine-filter” scale will focus on particular plant and wildlife species that generally occupy distinct habitats which cannot be accurately monitored at the landscape level. MIS were specifically selected as one tool to help evaluate diversity and species viability Forest-wide. The rest of the fine-filter work is specific to the known location(s) of the particular plant or animal. The intent of the fine-filter work is to track the species' population trends over time. The “coarse-filter” work focuses on tracking the changes in gross habitat conditions (such as cover type and structural changes).

To ensure that the Forest is meeting this objective, four attributes have been selected for monitoring vegetation because they capture the key components of vegetation diversity. Two of them involve tracking changes in the amount, quantity, and pattern of the vegetation that may appear over the life of the Plan. The third is a validation of the reference-work and landscape-scale tools. The final attribute is a progress report on the gathering of data for the Forest's old-growth inventory/reconnaissance.

MIS will also be used to monitor the Forest’s objective for providing for and maintaining diversity and to assess species viability. Project-level MIS analyses will address species viability within the context of the entire Forest. MIS analysis at the project level focuses on habitat and its availability and occupancy to support a minimum number of reproductive individuals that are well-distributed so that interactions can occur within the planning area (i.e., at the Forest level). MIS data collected at the project-level will also be used to assist in assessing the relationship between the Forest-level MIS population trends and habitat changes. MIS analysis at the Forest level focuses on population trend data for the selected MIS, which is the appropriate level for biological populations and the cumulative effects to habitat across the Forest. A multitude of information can be used for MIS monitoring which makes possible the evaluation of diversity in terms of its prior and present condition (36 CFR 219.26).

State of the Resource

Ecology Program. The ecology program was responsible for the plant-related items in the Biodiversity section of the Monitoring Plan. The plant items were as follows: (1) fine-filter assessment of plant species (*Astragalus ripleyi*; and other special status plants), and (2) coarse-filter assessment of habitat (landtype association status; special status plant communities; and old growth). Finally, the ecology program was responsible for making a determination of whether the biodiversity-related goals, desired conditions, S&Gs, and prescription allocations (per 36 CFR 219.12 (k)) were being met or were still appropriate.

A brief assessment of each of these topics follows. Additional detail is provided in Appendix A. Overall, the Forest appears to be generally meeting the goals, desired conditions, and S&Gs for the ecology resource as intended in the revised Forest Plan. Based on monitoring this past year, there is nothing to indicate that a change in MA prescription allocation is needed relative to the ecology resource.

The field research work is complete for *Astragalus ripleyi*. Results indicate that the population demographics for this species are primarily influenced by moisture availability. Furthermore, research shows that livestock grazing does not reduce *Astragalus ripleyi* population viability, at least in the short term. The recommendation is to avoid season-long grazing and to incorporate rotation-grazing schemes so that this species is not grazed at the same time of year every year.

A site visit was made to known *Draba smithii* sites (a Forest Service designated sensitive plant) and they appeared stable and secure. No new special status plants were found this year.

The IRI Center in Dolores has completed the contract mapping and attributing of common vegetation unit (CVU) polygons on the Forest. The updated vegetation data are being used for project analysis work.

Several Colorado Natural Heritage Program (CNHP) plant communities of special interest were visited as follows: (1) *Alnus incana* / *Cornus sericea*; (2) *Salix monticola* / *Calamagrostis canadensis* and (3) *Populus angustifolia* / *Salix exigua*. The sites appeared stable and there were no apparent threats.

Old-growth inventories were completed for the following projects: Alder Creek Prescribed Fire; Buffalo Pass Prescribed Fire; Burrow Blowout Timber Sale; Cathedral Pine Beetle Salvage Project; Embargo Fuels Treatment; McIntyre Gulch Fuels Reduction; Mill Creek Prescribed Fire; and Powderhouse Prescribed Fire. To date, old growth (Mehl 1992) on the RGNF remains uncommon. On the Divide and Conejos Peak Ranger Districts, old growth appears to be limited due to a lack of patchiness, lack of structural diversity, and/or net productivity being too high. Because the Mehl criteria are biased toward more productive sites, the Saguache Ranger District appears to generally lack the productive capability to meet the Mehl old-growth descriptions.

The Forest ecologist visited more than 20 percent of the Forest's ongoing projects (site visits made in conjunction with project-level plant biological evaluations [BEs]). Monitoring did not show a need for change in the biodiversity items in 36 CFR 219.12 (k).

Wildlife Program

The Wildlife Program was responsible for the wildlife-related items in the Biodiversity section of the Monitoring Plan which includes a determination of whether the biodiversity-related goals, desired conditions, Standards and Guidelines, and prescription allocations (36 CFR 219.12 (k)) were being met or were still appropriate.

Sustainability of the wildlife resource is primarily related to vegetative condition, especially as regards to specific habitat requirements (Regional Objective 2 of the Forest Plan). Evaluation of habitat condition is primarily driven by timber sales and other activities which provide an opportunity for both coarse- and fine-scale assessments. Proposed management activities are evaluated for their effects to wildlife and their habitats with larger activities often accompanied by site-specific surveys for some wildlife species. Based on these assessments, conservation measures intended to provide for species viability and habitat sustainability are incorporated, as appropriate.

The influence of bark beetles continues to affect forest habitat conditions, especially in spruce-fir forests. These influences are known to have positive effects on habitat for some species (e.g., woodpeckers) and negative effects on others (e.g., canopy-dwelling birds). Both large- and small-scale timber sales were planned and/or implemented across the Forest in response to the influences of bark beetles. These sales incorporated wildlife conservation measures during the planning phases. Future implementation and effectiveness monitoring will be important to determine how well the conservation measures were implemented on-the-ground and if they are achieving the intended results.

Fire risk in the wildland/urban interface continues to be of concern in lower-elevation mixed conifer, ponderosa pine, pinyon/juniper and grassland habitats. Vegetative treatments (i.e., mechanical and prescribed burns) were conducted to restore appropriate fire regimes. As time and funding allowed, species surveys were conducted on sites proposed for vegetation management prior to treatment to assess presence and distribution of TES/MIS species and determine habitat maintenance and/or improvement needs. Areas of big game winter range were rehabilitated in concert with fuels reduction projects in lower elevation grassland and pinyon-juniper habitats.

Inventories and/or population monitoring for TES species were primarily related to project activities such as timber sales. Input of Forest wildlife data into the FAUNA database continued in 2007. Lynx habitat baseline

data are continually updated based on proposed projects and management activities, and reported to the U. S. Fish and Wildlife Service (FWS) in an annual report. Southwestern willow flycatcher surveys were conducted Forest-wide, as well as in conjunction with project inventories to determine presence and distribution of suitable habitat on the Forest and whether suitable sites are occupied. Results are reported annually to FWS and to date, no flycatchers have yet been documented occurring or nesting on the Forest. In 2007, the Forest remained a primary cooperator with multiple other entities in the development of a Habitat Conservation Plan (HCP) for the Southwestern willow flycatcher in the San Luis Valley. The HCP is being written by a contractor and remains uncompleted at this time. The Forest also continues to cooperate with adjacent Forests and the FWS in conducting population and habitat monitoring for Uncompaghre fritillary butterfly; to date there are 6 identified populations on the Forest and habitat surveys remain ongoing. In August of 2007, bald eagles were de-listed from the Endangered Species Act. They were therefore moved from the Forest T&E list to our regional sensitive species list, where they will continue to be evaluated in Biological Evaluations. Bald eagles are considered winter residents along the major river systems in the Forest and have not been recently documented as nesting on the Forest, although there is a confirmed recurring breeding site on private land within the RGNF boundary. Mexican spotted owls still have not been confirmed on the Forest, although there has been a recently confirmed occurrence on the adjacent San Juan and Pike/San Isabel National Forests.

The current status of the Forest's T&E species is detailed in the annual reports produced for each species. As noted above, there was a change in our T&E species list in 2007 with the delisting of the bald eagle. However, no other changes in species status occurred in FY07 since the updated Forest Plan Biological Assessment (BA) was prepared as part of the Forest Plan MIS Amendment in 2003. As noted in the FY06 M&E Report, both the boreal toad and Gunnison's sage-grouse have been dropped by the U.S. Fish and Wildlife Service for consideration for listing under the federal Endangered Species Act. In 2007, the Regional Forester's Sensitive Species List was also updated to include the Rocky Mountain bighorn sheep. The Forest Plan Biological Evaluation (BE) still remains to be updated to include an evaluation of those new sensitive species from the revised 2005 and 2007 Regional Forester's Sensitive Species List that are found on the Forest. Raptor surveys have documented recurring breeding of northern goshawk and peregrine falcon in new and known sites. The Monitoring Colorado Birds (MCB) program annually reports results of state-wide avian surveys and trend analyses, including Forest sensitive and management indicator species. However, no report was received from 2007 due to funding cutbacks between the cooperators. The Forest also receives monitoring reports from the Colorado Division of Wildlife (CDOW) on Canada lynx, peregrine falcons, boreal toads, bats, bald eagles and game species. All of these updates continued in 2007.

MIS monitoring was again conducted in 2007 on a Forest-wide scale consistent with our Forest monitoring protocols. MIS monitoring data for mammalian (deer and elk) and fish species are obtained from the Colorado Division of Wildlife (CDOW), with fisheries data collected and reported jointly by CDOW and Forest personnel. Trend data for avian species are not yet available at the Forest level, as Forest-level monitoring was only initiated in 2004. The preliminary Forest-level analysis of avian MIS data from the MCB program and the supplemental Forest transects expected in the fall of 2007 did not occur due to data analysis issues, and are now expected in FY08. The CDOW again provided trend data for deer and elk in 2007. Based on this information, most deer populations remain at or below objective while elk populations remain above objective. MIS monitoring for Rio Grande cutthroat trout is reported below in the Fisheries Program section.

Overall, the Forest appears to be generally meeting the goals and desired conditions for the Wildlife resource as intended in the revised Forest Plan, as amended. As recommended in 2007, however, it is expected that the existing process for collecting implementation or effectiveness monitoring data for wildlife Standards and Guidelines may be refined in 2008 to better address questions associated with this type of monitoring. A refined process for evaluating the relationship between road densities and deer and elk as Management

Indicator Species is also recommended. Data pertaining to these changes will be collected in 2008 and reported in the FY08 M&E Report.

Fisheries Program. The desired condition for biodiversity is to maintain viable populations of native and desired nonnative species. The following is a summary of the state of the fisheries resource on the RGNF.

An average snow pack on the Forest resulted in good stream flows with good-to-excellent fishing reported on most streams and reservoirs. Fish management activities conducted in 2007 include: sportfish and native fish inventories; fish migration barrier inspections; sportfish/native fish stockings; habitat evaluations; and stream crossing inventories. These activities were completed in partnership with Bureau of Land Management (BLM) and Colorado Division of Wildlife.

Sport fishing is a major activity on the Forest. The Forest offers a variety of fishing opportunities ranging from high mountain lakes and streams to rivers and reservoirs. CDOW maintains an active hatchery program supporting recreational fishing on the forest and stocks a variety of native and desirable nonnative fish species. Stocked fish include Rio Grande cutthroat trout (RGCT), rainbow trout, brown trout, brook trout, Snake River cutthroat trout, kokanee salmon, and splake. Sportfish inventories on the Forest, utilizing electrofishing and gill nets, were conducted on three streams and one reservoir. Results from these inventories confirmed stable, self-sustaining populations of desirable nonnative trout species.

Native fish management and restoration is a high priority on the Forest. Management activities completed in 2007 for native fish include population monitoring & evaluation, wilderness stockings, stream barrier evaluations, stream crossing inventories, and assisting in finalizing a range-wide Rio Grande cutthroat trout status report. Density, biomass, and population estimates were conducted on three RGCT streams and one reservoir. Approximately 100,000 fingerling RGCT were stocked into Forest wilderness lakes and streams in 2007.

RGCT are currently found in 57 streams and 56 lakes/reservoirs on the Forest, totaling approximately 371 stream miles and 1,042 surface acres, respectively. RGCT populations are divided into three categories based upon genetic purity: core populations (>99 percent pure), conservation populations (>90 percent pure), and recreation populations (RGCT coexisting with nonnative trout species). Of the 57 streams, 27 of the streams and 2 lakes are considered core or conservation populations and 30 streams and 54 lakes/reservoirs are considered recreation populations. The number of RGCT recreation populations should remain fairly constant on the Forest as these are supported by CDOW hatchery stockings. These numbers differ slightly from 2006 due to updated genetic results and information gathered from a detailed data compilation required for a range-wide 2007 RGCT Status Review conducted by U.S. Fish and Wildlife Service. The three RGCT populations surveyed in 2007 were rated as “Secure and Expanding” with the populations in good condition with relative weights above average, increases in biomass estimates, and multiple age classes present. RGCT collected in the reservoir survey were in very good condition with relative weights above average.

In 2002, Rio Grande suckers were found in five streams on the Forest. Since 2002, two additional streams, Big Springs Creek and Lake Fork Conejos River, have been renovated and stocked with Rio Grande suckers. Big Springs Creek was stocked with Rio Grande suckers in 2003, 2004, and 2006; and Lake Fork was stocked in 2005, 2006, and 2007. Only two sucker streams were surveyed in 2007. Sucker survival was documented in Big Springs Creek and Lake Fork Conejos River, however there was no evidence of natural reproduction.

Only one viable population of Rio Grande chub is known to exist on the RGNF. A self-sustaining population of Rio Grande chub exists in the Alamosa River drainage from Silver Lakes to Terrace Reservoir. Swale Lake, located in the South Fork Rio Grande drainage, was stocked with 156 Rio Grande chubs in 1992. Only 1 chub was collected from Swale Lake during 1997 and the population is currently considered extirpated.

Two stream migration barriers were evaluated in 2007 and both were found to be functioning properly. Stream crossing inventories were conducted on four streams in 2007. The four streams comprise the La Garita Creek watershed and are being considered for reclamation and restored back to a native fishery. The technique utilized was the Region 2 Coarse Screen Assessment for Juvenile and Adult Salmonids (adapted from Region 1 Salmonid Fish Passage Evaluation Criteria). Three of six crossings evaluated for fish passage failed to meet the criteria for passage at either the adult or juvenile life stages; or both life stages. It is important to note that the crossings may only be a barrier or partial barrier at certain times of the year and fish may be able to pass through the structure at other times of the year. Information gathered from crossing inventories in 2006 and 2007 were used to develop and submit crossing replacement/removal projects for funding through the National Fish Habitat Initiative and the Forest Service's Legacy Roads Initiative. Selection of projects and funding will be available in 2008 from these programs.

Extremely low stream flows during the period from 2001 through 2003, and competition with nonnative species, appear to have had some impact on native fish distribution and abundance on the Forest. Impacts ranges from less than desirable population parameters, to increased populations of nonnative species, to entire loss of populations. Habitat problems appear to be site specific and not an overall threat to trout populations across the Forest. Currently, habitat problems are reflected in less than desirable population parameters within a specific stream segment, but generally are not a threat to the overall population throughout the entire stream. The Forest-wide abundance and distribution of Rio Grande cutthroat trout appear to be stable and secure and self sustaining nonnative trout populations are wide spread throughout the perennial streams across the Forest.

The information available for the fishery resources on the Forest suggests that when properly implemented, the revised Forest Plan direction, desired conditions, and S&Gs, are effective in protecting biodiversity. However, this should continue to be evaluated to determine if there is any need for change; but at this time, no changes to Forest Plan direction, desired conditions or S&Gs are warranted.

Fire and Fuels Management

Monitoring Requirements

"Serious or long-lasting hazard" potential is reported based on a determination of "relative resource values." Hazard potential from wildfire will be determined through ocular estimates, fuel transects, onsite inspections, and/or surveys. In addition, the fire program is monitored through the National Fire Management Analysis System (NFMAS). This economic-analysis program addresses the "relative resource value" determination through a relatively complex cost/benefit evaluation of the Forest's fire suppression program. A new analysis system is being developed (Fire Program Analysis, or FPA), but until such time as it is fully operational, NFMAS will continue to provide the "baseline" for economic efficiency.

State of the Resource

The fuels resource can best be represented as a component of Forest health. In FY 07, several areas within Fire Regime 1 (High Frequency/Low Severity) and Fire Regime 3 (Medium Frequency/Mixed Severity) and in Condition Class 2 or 3 were identified, evaluated, and planned for treatment. Though the residual effects from the previous drought appear to be on the decline, prescribed fire treatment options must continue to consider effects carefully and apply fire judiciously. The Forest treated approximately 3,160 acres of hazardous fuels. Where fire treatments were implemented (2,020 acres), results were favorable. Very short "burn windows" this year constrained our ability to apply fire, and a reduction in target was requested and approved. Mechanical fuels treatment options continue to be utilized (1,140 acres); both to address the lack of appropriate burn windows, alleviate concerns for projects near developments, and maintain our focus on Key point #3 of the National Fire Plan: Hazardous Fuels Reduction for "communities at risk." The planning in

these areas (to reduce the risk of crown fire initiation and spread) has addressed the potential conflict between what is the best silvicultural treatment and what will truly reduce the risk of crown fire initiation and spread.

On-going fuels/forest health surveys and evaluations continue to provide land managers with valuable insight into the state of the resource as it relates to the potential for wildland fires to create unacceptable resource impacts. Though some areas have been identified as such, the Forest Plan provides adequate direction and needs no significant changes in fire and fuels management. A supplement or addendum to the Forest Plan may be needed to reflect some revised terminology and definitions contained in the 1996 Federal Wildland Fire Management Policy Action Plan, the Review and Update of the 1995 Federal Wildland Fire Management Policy (January 2001), the 2005 Wildland Fire Use Implementation Procedures Guide, and the 2006 Interagency Prescribed Fire Planning and Implementation Procedures Reference Guide.

General Infrastructure

Monitoring Requirements

Monitoring will be reported based on the results of routine inspections of all facilities, including dams, facilities, drinking water, road bridges, trail bridges, and Forest development roads.

State of the Resource

Monitoring, based on the results of routine inspections of all facilities listed above, indicates the general infrastructure is meeting the needs of Forest users for access and multiple-use management.

Health and Safety

Monitoring Requirements

This monitoring objective is focused on meeting the intent of the National Health and Safety Codes and Occupational Safety and Health Administration guidelines.

State of the Resource

The intent of the National Health and Safety Codes and Occupational Safety and Health Administration guidelines were met.

Heritage (Cultural) Resources

Monitoring Requirements

Monitoring is based on the evaluation of protection measures for resources discovered during project proposal evaluations. Monitoring of selected highly significant heritage resources not associated with specific project proposals will also be reported. Consultation efforts with recognized American Indian Tribes and Nations demonstrating concern for areas of cultural importance will be monitored and reported.

State of the Resource

The monitoring of several completed projects where heritage resource sites were identified for protection indicates that protective measures were adequate. The monitoring of heritage resource sites not associated with a specific project and that have the potential to be vandalized should be continued to further comply with established S&Gs. A review of project-level Heritage Resource Inventory Reports for FY 07 indicates that projects with the potential to impact heritage resources are being inventoried and protective measures are adequate.

The Tribal Consultation Bulletin is used for initial consultation with American Indian people concerning project proposals that may impact cultural sites important to them. Expansion of the numbers and the types of projects included in the Tribal Consultation Bulletin is recommended to further comply with S&Gs.

Minerals

Monitoring Requirements

Monitoring is based on a verification process to determine if the conditions in the Forest Plan are still valid, and whether oil and gas operations could be allowed on a proposed lease tract. Monitoring of oil and gas will occur if such activities are developed—to date, no oil and gas development has occurred on the Forest, which is well below the potential level analyzed in the Forest Plan. Monitoring of locatable minerals will be reported based on the inspection and enforcement of operation plans to assure compliance with the Forest Plan.

State of the Resource

The minerals monitoring program requires the Forest to validate leasing activities as well as S&Gs. Thirty-eight oil and gas lease parcels were sent to BLM to be offered in a May 2008 oil and gas lease sale. There were no major proposals in the locatable minerals program. The Forest continued to monitor water quality in Windy Gulch below Homestake Mining's Bulldog Mine in Mineral County. In the mineral materials program, the Forest Service administers a number of in-service, free-use, and commercial common variety mineral operations. All are in compliance with Forest Plan S&Gs.

Noxious Weeds

Monitoring Requirements

Monitoring of the location and extent of noxious weeds will be reported based on the evaluation of control methods on infested areas on the Forest.

State of the Resource

Noxious weeds are a persistent concern on the Forest. Inventories and control were conducted in FY 07. Those species that have increased or have been inventoried more thoroughly are: toadflax, oxeye daisy, short whitetop (also known as hoary crest), Canada thistle, black henbane, and Russian knapweed and Downy brome (also known as cheat grass). Yellow star thistle has not been found on the Forest, but inhabits adjacent counties to the west of the Continental Divide. The Forest treated 325 acres of noxious weeds in 2007. Problems with the AIS contracting system delayed implementation of a weed contract until mid June, but targets were met by implementing mechanical treatment (hand pulling) and using domestic sheep and biological agents (on about 65 acres). Chemical weed treatment near Platoro continues to be controversial with some local residents, so domestic sheep are being used to treat oxeye daisy infestations. The oxeye daisy and yellow toad flax infestations are spreading within the Platoro private land.

Overall, the Forest Plan noxious weed management objectives are being met. At this time, there is no need to make changes to the Forest Plan noxious weed management direction, but the existing 1996 weed treatment EA needs to be updated and, due to budget issues, the planned update of the Rio Grande weed EA will not be completed until winter/spring FY 09. A draft is currently being prepared. To better coordinate the treatment efforts and to improve the efficiency of the FS and BLM to meet targets, a jointly funded Valley-wide Weed Coordinator has been hired for 5 months of the year. This is in part of the Valley's Service First Agreement. An accurate treatment map was obtained for the first time this year as a result of requiring the use of a Geo Explorer GPS [global positioning system] unit and a data dictionary prepared by the Forest Service and made part of the 2007 contract and bid package.

Range

Monitoring Requirements

Monitoring of suitable rangelands for condition and trend will be reported based on the information obtained from the Rocky Mountain Region's Rangeland Analysis and Management Training Guide (RAMTG) inventory process. The information is expected to yield baseline data to determine desired conditions of rangelands. Monitoring of range suitability will be reported based on determinations made during the development of EAs and allotment management plans (AMPs) for each allotment. Range utilization will be reported based on the results of routine field analysis.

State of the Resource

Rangelands are being managed for a variety of seral stages, with most being managed for upper mid-seral to high-seral status. Continued inventory of rangelands conducted in FY 07 indicated that while there are a variety of seral stages found throughout the Forest, there is an imbalance of seral-stage classes. There is not enough representation in the upper-seral condition classes. Environmental analyses have been initiated to identify areas needing improved management and to correct management deficiencies. During the 2007 grazing season, only about 95 percent of the allowable numbers of livestock were placed on the Forest to further help the range recover from drought. Not all permittees have built up their herds to pre-drought numbers found in 2001 for various reasons, including the high price of buying back replacement cattle and continued short-term dry spells that affect the availability of forage on private pastures. Allotment analysis data collection and getting the Forest back on track with the Rescissions Act schedule has been a major emphasis for this year. NEPA [National Environmental Policy Act] decisions were signed affecting 26 individual allotments in FY 07. This effort has resulted in the completion of 49 allotment decisions in the past two years compared to 17 in the previous 10 years.

Overall, the Forest Plan range objectives are being met, but as a result of a FY 07 Regional Office functional assistance review, several changes have been implemented to improve the efficiencies of the Forest range program. There is an additional emphasis on data collection and the TEAMS group will assist with the FY 08 NEPA documents. None of these changes require any adjustments in the Forest Plan range objectives.

Recreation

Monitoring Requirements

Developed Recreation. Developed recreation sites are monitored to assess the following: a) visitor expectations, trends, and customer satisfaction, and b) quality and safe facilities. Visitor use and expectations will be monitored and reported based on customer surveys and/or customer comment cards. Developed recreation site monitoring will be based on facility condition surveys and hazard inspections. Wolf Creek Ski Area monitoring will be done through approved summer and winter operating plans. Special uses will be monitored through permit compliance and evaluations. Developed sites will be monitored for use compared with projected outputs in the Forest Plan. Developed sites will be evaluated relative to Forest Plan Goals and Objectives and Standards and Guidelines.

Dispersed Recreation. The Forest will monitor effects of its travel management plan, including ATV game retrieval and snowmobile use, during routine summer inspections and fall big game hunter patrols. The Forest will monitor trail conditions and trail needs based on trail inventories and logs. Dispersed recreation will be evaluated relative to Forest Plan Goals and Objectives and Standards and Guidelines.

Unroaded Areas. Monitoring will be reported based on a representative assessment of two backcountry areas per year. This will include the assessment of motorized and non-motorized recreation trail use, levels and type

of use, areas of conflicts, identification of areas of concentrated use, and other resource impacts (biological and physical). Backcountry Areas will be evaluated relative to Forest Plan Goals and Objectives and Standards and Guidelines.

Wild and Scenic Rivers. Monitoring will be reported based on the assessment of resource-management activities that occur within one river corridor every three years. River corridors will be evaluated relative to Forest Plan Goals and Objectives and Standards and Guidelines every three years.

Wilderness. Monitoring will be reported based on the evaluation of wilderness management thresholds (specific indicators) and appropriate management actions to determine if wilderness S&Gs are being met. Wilderness Areas will be evaluated relative to Forest Plan Goals and Objectives and Standards and Guidelines.

State of the Resource

Developed Recreation

Customer Satisfaction: Customer comment cards received by American Land & Leisure (AL&L) campground concessionaire indicate that most users rate the service as excellent and that they would return to the site in the future.

Developed Sites: The Saguache Ranger District maintained 7 campgrounds, 2 rental cabins, and 12 trailheads to standard. This included an assessment of hazard trees and the removal of hazard trees at 7 campgrounds. AL&L, campground concessionaire on the Conejos Peak and Divide Ranger Districts, operated 26 campgrounds, 6 picnic areas, 5 trailheads, and 2 boat ramps to standard. In addition to the sites maintained by AL&L, the Divide Ranger District maintained 17 trailheads to standard. The District also maintained 10 day-use recreation sites and one additional campground to standard.

Ski Area: Summer and winter operating plans for Wolf Creek Ski Area were completed and approved in FY 07. The master development plan (MDP) needs to be updated.

Special Uses: The Divide Ranger District administered 11 outfitter/guide special use permits to standard and 59 recreation special use permits to standard; the Saguache Ranger District administered 4 outfitter/guide permits to standard and 1 recreation special use permit to standard; and the Conejos Peak Ranger District administered 8 outfitter/guide permits and 22 recreation special use permits to standard.

Dispersed Recreation

Trails: Trail condition surveys were completed on four trails which included Ute Creek, East Frisco, Middle Frisco and Four Mile trails. Approximately 307 miles of trails on the Forest received maintenance while more than 400 miles of trail, both motorized and non-motorized met standard. About 14 miles of trail re-route work was completed on the Continental Divide National Scenic Trail. This work began about two miles south of Stoney Pass and ended at Cataract Lake.

Travel Management: An action plan for implementation of the 2005 Travel Rule was completed and posted on the RGNF web site. The Forest has updated the INFRA database to accurately reflect previous travel management decisions in preparation for publication of motor vehicle use maps in 2008. Updating and verifying the accuracy of the INFRA database for roads and motorized trails will continue through 2008.

ATV Big Game Retrieval: The Forest increased efforts to monitor ATV big game retrieval in 2007. Due to the warm weather in the fall of 2007 not many elk were taken so there were not many opportunities to monitor possible physical resource damage occurring as a result of ATV big game retrieval. There was one

case in Saguache Park where a hunter was cited for using a pick up truck to retrieve downed game off of the designated roads. He claimed that he thought he was in compliance with the ATV big game retrieval policy and his actions caused tire tracks across an open park. There was another instance where game was legally retrieved with an ATV in Dimick Gulch on the Saguache R.D. and the hunter cut trees along a closed road to retrieve the elk. In this same area a hunter claimed that his hunting experience was adversely impacted by a hunter retrieving game with an ATV that was being legally retrieved in compliance with the game retrieval policy. Many hunters were interviewed regarding the game retrieval policy. Many hunters with ATVs were not aware of the game retrieval policy while other hunters understood it well. There were also many hunters who misunderstood the policy and did not realize that it was restricted to afternoon hours, others thought that using a pick up truck to retrieve game was acceptable, and others thought that they could use their ATVs to hunt off road. The results of these interviews are that 48% of the hunters with ATVs accurately understood the game retrieval policy, 38% were unaware of the policy, 11% did not fully understand the policy, 3% thought they could go anywhere on their ATVs to hunt.

Unroaded Areas. The Governor of Colorado submitted a roadless area petition to the Secretary of Agriculture in 2007. The roadless area petition was accepted. The Forest worked to correct errors to roadless area boundaries following acceptance of the petition.

Wild and Scenic Rivers. Wild and scenic river corridor monitoring was not performed in FY 07. One river corridor should be monitored every three years or during project level planning within a river corridor. Wild and Scenic River Corridor monitoring is scheduled for 2008.

Wilderness. Wilderness monitoring took place in the Ute and Trout compartments of the Weminuche Wilderness Area. This monitoring included campsite density monitoring and trailhead registration monitoring. Results indicate that resource standards are being met in the South San Juan Wilderness Area. Overall, the Forest Plan recreation and wilderness objectives are being met.

Noxious weeds is the element addressed in the 2007 Chief's Ten Year Wilderness Stewardship Challenge. The South San Juan and Weminuche Wilderness areas have approved noxious weed treatment plans. These plans were reviewed in 2007 to comply with the Chief's Ten Year Stewardship Challenge.

Research and Information Needs

Monitoring Requirements

Monitoring will be reported based on the results of all resource-monitoring activities.

State of the Resource

Progress is continuing on (1) watershed-based inventories for old growth in conjunction with proposed timber harvest activities; (2) Forest roads inventories; and (3) collection of floral and faunal occurrence data for inclusion in the Colorado Natural Heritage Program Biological Database. Under the National Resource Information System (NRIS), a civil rights project is ongoing to develop methods of identifying under-served communities.

Research Natural Areas (RNAs)

Monitoring Requirements

Monitoring will be reported based on inspections of established research natural areas (RNAs) every 5 years.

State of the Resource

The Deadman RNA was visited and visually evaluated. The majority of the RNA appears to be minimally impacted by human activity. Natural processes are the prevailing influence.

Road Construction, Closures, and Decommissioning

Monitoring Requirements

Monitoring of road construction, closures, and decommissioning will be reported based on routine field reports.

State of the Resource

In 2007, Conejos Peak Ranger District decommissioned 7 miles, Divide Ranger District decommissioned 5 miles, and Saguache Ranger District decommissioned 3 miles of unclassified roads. Approximately 121 miles of classified and unclassified roads have been decommissioned since 1996.

Scenic Resources

Monitoring Requirements

Monitoring of scenic resources will be reported based on a determination of disturbance, using photographs, onsite inspections, and aerial photographs.

State of the Resource

Forest areas were monitored for scenic resources and some were not in compliance during FY 07. In order to obtain scenic resources objectives, a project should comply with scenic integrity objectives (SIOs) within 2 years after project implementation. These areas will continue to be monitored for changes.

Wolf Creek Ski Area has been notified of the recommended changes to the entrance walls and has agreed to stain the concrete color to comply with SIOs. Newly built walls and warming huts are not yet in compliance; however, the plan is to modify the colors to bring the walls and facilities into compliance by FY 08. The Wolf Creek project is ongoing.

The Village at Wolf Creek access analysis identified the need to change the SIO at the Wolf Creek Ski Area to make it compatible with the existing visual situation.

The Highway 160 Expansion Project is being monitored for SIOs. Retaining wall staining marginally meets the SIOs for the corridor above the new tunnel construction. Rock cuts across from the Fun Valley Campground Resort do not meet the Forest Plan SIOs as mapped “High”; however, the rock cuts can be considered to meet the SIO of “Moderate to Low.” Changes to the Colorado Department of Transportation (CDOT) specifications were made and the new phase of the project better meets the SIO by increasing texture on rock cuts, soil-nail walls, and the use of darker stains on rock walls near the ice age sign at the Lake Fork Trail Head. In addition, blasting techniques are being monitored to assess whether they meet SIOs due to the use of pre-slit blasting along a visually sensitive portion of Highway 160. Monitoring will continue along the highway on tree removal, storage areas, wall staining, seeding, and replanting to assess whether they meet the SIOs for the Highway 160 Corridor. These areas will continue to be monitored through project completion approximately year 2011.

Range improvement features, such as corrals along the Los Caminos Scenic Byway, meet a condition of “Moderate”, but do not meet “High” as mapped. Efforts are underway to better meet both scenic and economic needs along the scenic byway. The County Line Timber Sale as of December 2007, was not in

compliance for Scenic Resources due to a second catastrophic event (blowdown). This area will be continually monitored throughout this year for changes to the Scenic Resources.

At this time, there is no need to make changes to the Forest Plan's scenic resource direction.

Soil Productivity

Monitoring Requirements

The protection of soil productivity is monitored based on the requirements of 36 CFR 219.12(k)(2). The Forest uses several tools for soil monitoring, including the collection and analysis of core soil samples, erosion modeling, ocular estimates, transects, soil health assessments, investigations, and professional judgment. Soil health assessments have been completed to determine whether long-term soil productivity and soil health were maintained or improved. Management actions and effects are evaluated using existing Forest Plan S&Gs. Soil evaluation techniques were employed on ground-disturbing projects with potential for high soil-erosion, mass-movement hazards, or other soils concerns.

State of the Resource

The Forest soil resource is monitored through project evaluations and soil health assessments. In FY 07, several projects were reviewed. Soil health is the assessment of the current soil health condition and its ability to sustain the potential natural community of vegetation for the long term. The Forest uses the established Forest Plan S&Gs as a basis for evaluation. The three types of soil health ratings are as follows: 1) properly functioning, 2) at-risk, and 3) impaired. Properly functioning means that soil physical, biological, and chemical properties are functioning in a manner that maintains soil productivity. At-risk means that some soil feature has been changed to where there is a risk of losing productive capacity through erosion, nutrient losses, or loss of surface cover. Impaired means that erosion has been occurring at accelerated rates or that unmitigated impacts like compaction are present.

Monitoring Site #1: Rangeland Health Monitoring of North Saguache Allotments. A number of soil health assessments were conducted on the Klondyke, Alder, East and West Cross Creek, Spanish and Middle Creek Allotments. Over the broad extent, soils were meeting Forest Plan desired conditions. Isolated concern areas were described and documented.

Monitoring Site #2: Million Fire Monitoring. The Million Dam area and the inlet to Million Reservoir were examined. The inlet likely needs a better design since the inlet pipe is highly subject to stream dynamic and runoff events which could clog the inlet. The revegetation of the sediment catchments looks excellent. The Forest Plan monitoring plan directs periodic assessment of reclamation and revegetation efforts and this area should be monitored in the future.

Monitoring Site #3: Antelope Timber Sale, Saguache Ranger District. On March 2, 2007, the soil conditions at the Antelope Timber Sale, northwest of Saguache were inspected. The purpose of the trip was to monitor soil conditions and compliance with Forest Plan direction. The Forest Plan states: "Operate heavy equipment for land treatments only when soil moisture is below the plastic limit or protected by at least 1 foot of compacted snow or 2 inches of frozen soil." There was not much snow left in this area. There was about 6 inches on north slopes and south-facing slopes were bare. A landing and skid trail area were tested with a spade and soils were found to be frozen more than 2 inches thick, thereby meeting Forest Plan standards.

Some waterbars had been installed, indicating that the harvest is completed for this point in time. While the waterbars were marginal in construction, they were the best that could be accomplished under frozen soil conditions. Winter logging on frozen soils should be encouraged as long as the conditions allow.

The photo above shows a skid trail on a slope in the Antelope Timber Sale, Saguache Ranger District. The trail is barely visible since soils were frozen and the impacts were light.

Monitoring Site #4: Pool Timber Sale Revisited for Soil Impacts. On June 21, 2007, soil sampling was done in a timber sale that was monitored and sampled 16 years ago. Sampling was completed on 4 major skid trails and included 32 random samples using a core sampler to determine bulk density. The samples were analyzed in the lab and bulk density was determined. Results showed within skid trails, that the same amount of compaction evident in 1992 was evident 16 years after timber harvest in 2008. The skid trail data from 1991 and 2007 was statistically different from the undisturbed reference samples taken in 1991. There has been no recovery from compaction over a 15-year sampling period. The results are planned for publication by the Rocky Mountain Research Station.

Monitoring Site #5: Restoration of Illegal Travel Routes: On May 23, 2007, an interdisciplinary evaluation of the effects and impacts of closure treatments on illegal two-track roads was done. The various treatments included carsonite signing, rock boulder placements, cedar posts with closure signs, subsoiling with a winged subsoiler, and combinations of the above treatments. The archaeologists were particularly concerned about site impacts from the subsoiling activities. The subsoiler lifts the soil and may expose or damage some artifacts. The best assurance of protection for archaeological resources is for the Districts to use the watershed checklist prior to project implementation and clear any treatment areas for heritage resources. From a soils standpoint, the subsoiler has desirable effects by restoring infiltration and reducing runoff that can cause soil erosion.

In general, combinations of treatments, and especially those that included the subsoiler treatments, had the best success as far as discouraging unauthorized use by hunters and others over the past hunting season. General observations indicate that signing seemed to be only about 50% effective in restricting off-road use. In many cases, vehicles simply went around signs and conducted unauthorized use. The motorized vehicle travel map (MVUM) required under the 2005 Travel Rule should provide a better law enforcement tool. It will also help better clarify to the public, which routes are open and which are closed on the Rio Grande National Forest.

The photo above shows an example of subsoiling rehabilitaton and signing on an unathorized two-track road.

Special Interest Areas (SIAs)

Monitoring Requirements

Monitoring will be reported based on on-site inspections of designated Special Interest Areas every five years.

State of the Resource

The botanical area at Hick's Canyon was visually inspected. *Astragalus ripleyi* plants appear to be vigorous and robust. No new concerns were noted.

The Wagon Wheel Gap Watershed Experiment Station SIA (Historical) was visually monitored in FY 07. There were no noticeable impacts relating to the area noted during the SIA review.

Timber

Monitoring Requirements

Restocking of final-harvest areas is required by 36 CFR 219.12(k). Monitoring will consist of surveys conducted 1, 3, and 5 years after final harvest. One-year surveys are onsite inspections, while surveys after 3 and 5 years are statistically valid plot-inventory exams.

36 CFR 219.12(k) requires that all Forest lands be examined at least once every 10 years, to determine if *unsuitable* lands have become *suitable*, or vice versa. Monitoring will also confirm that lands identified as suitable do, in fact, meet suitability criteria.

36 CFR 219.12(k)(5)(iv) requires the Forest to monitor levels of destructive insects and disease organisms following management activities. The monitoring of created openings is tied to various legal requirements, including 36 CFR 219.12(k)(5)(iii) and 36 CFR 219.27(d)(2).

State of the Resource

Overall, timber resources across the Forest reflect structure and composition within a natural range of variability. Some short-term human influences have affected, and are still affecting, the structure and composition of forested communities, particularly lower-elevation forest cover types.

Onsite field monitoring during the summer of 2007, primarily within past timber sale boundaries are discussed in the following sections.

Restocking. Regeneration of areas harvested since the mid-1970s when the Forest changed from mostly clearcutting to other regeneration harvest systems like shelterwood and uneven-aged management, has been consistently successful with natural stocking. The naturally occurring annual addition of new trees in mixed conifer forests has resulted in ample stocking.

First-year and 3rd year survival checks were completed on 150 acres on the Drill Pad Fire Salvage and West Fork Fire Salvage and 179 acres within the Twister Blowdown area. Surveys and certification of successful natural regeneration were completed on 934 acres in the Million Burn area.

Reforestation activities planned for 2008 are additional natural regeneration surveys in the Million Burn area, and third-year survival surveys in areas planted in 2006.

Timber Suitability. The Forest amended the Forest Plan in 2000 with Amendment #4 to address timber suitability. The suitability amendment took effect in 2003 after USFWS consultation with the updated Forest Plan BA. Timber suitability has been, and will continue to be, evaluated during the project-level planning phase for timber sales. Planning for the Burro/Blowout Salvage, Ruston Aspen, Handkerchief Mesa, and Fox Creek occurred in 2007, and an evaluation of suitability occurred within these analysis areas. No further monitoring of timber suitability has been completed.

Insect and Disease Infestations. Foresters and entomologists have been actively monitoring insect and disease activities across the Forest. While there has been some success in control activities, the overall condition of forest health is declining with serious levels of insect outbreaks, probably related to the extended drought and mild winter temperatures. Additionally, many of the areas where insect and disease problems occur fall in the habitat and habitat linkages for Canada lynx. A summary of the ongoing activities across the Forest is listed below:

- The Grouse Timber Sale was sold in 2002 and harvesting of trees infected with spruce beetle on the first timber sale is complete. During the summer of 2005, monitoring of the site found that numerous additional trees had been infected with spruce beetle. These traps showed spruce beetle activity was still occurring, but at reduced levels from previous years. A new sanitation/salvage sale was sold in 2006, focusing on the removal of spruce beetle infested trees. Another salvage sale is planned for 2008. Monitoring of spruce beetle will continue in 2008.
- Spruce beetle monitoring occurred on the Finger Mesa Timber Sale in 2007. Additional beetle-infested trees were marked and added to the timber sale contract within the existing sale area boundary. Further monitoring of this area is planned for 2008.
- The Shaw Lake Spruce Beetle Sanitation/Salvage Sale was offered in 2005. The sale was minimally harvested in 2007. Additional monitoring in the Shaw Lake area is planned for 2008, and newly infested trees that are identified will be included in the timber sale contract.
- Monitoring of the ongoing spruce beetle infestation continued in the County Line Analysis Area in 2007, with significant spruce beetle activity noted to continue in the area. The second sanitation/salvage timber sale, Escarbajo, was sold in 2007. Additional sales are planned in 2008. Continued monitoring is planned.

- Spruce beetle activity was discovered in the Big Lake, Lake Fork and Red Mountain/Cornwall areas of the Conejos Peak Ranger District. The Cerro Rojo Sanitation/Salvage Timber Sale treating this area was offered in 2006. Treatment continued in 2007 with additional trees being marked for removal. Additional monitoring of this area is planned for 2008.
- Significant spruce beetle activity was discovered in the Rock Creek area of the Divide Ranger District in 2005. The District initiated planning for treating this area in 2006 and implementation of the harvest is expected in 2008.
- Significant spruce beetle activity was discovered in the Fern Creek and Love Lake area of the Divide Ranger District in 2007. The District plans to initiate planning for treatment in 2008.
- Spruce beetle activity was discovered in areas that were scheduled to be treated as part of the Blowout Pass timber sales. Planning efforts to treat this infestation began in 2006 and the Marble sanitation/salvage timber sale was sold in 2006. Additional sales are planned for 2009. Monitoring of this area is ongoing.
- Spruce beetle activity was discovered at the Wolf Creek Ski Area in 2007 and additional surveys, marking, and removal of infested trees occurred during the summer of 2007. Additional monitoring of the area is planned for 2008.
- The Antelope/Trickle Stewardship Contract for treatment of mountain pine beetle (MPB) on the Saguache Ranger District was awarded in 2004. The treatment area is located on both Forest Service and Bureau of Land Management lands and is in progress. Monitoring in 2007 indicates that mountain pine beetle is continuing to spread within the treatment areas. Additional volume was marked in 2007 to address the additional mortality occurring in the project area.
- Douglas-fir beetle has continued to be observed and is increasing on the Saguache Ranger District in Douglas-fir stands, which is expected due to the combination of the recent western spruce budworm infestation and drought conditions that have severely stressed trees. Monitoring has shown that MPB has moved into numerous ponderosa pine and some lodgepole pine stands across the Forest. Treatment began in 2007 on the McIntyre Salvage Timber Sale and the Embargo Creek Stewardship Project to address MPB. Implementation of these projects is expected to continue in 2008.

Harvest Openings. Harvest openings from current, recent, or proposed timber management have not approached, and are not expected to approach, the National Forest Management Act (NFMA) 40-acre limit. Harvest openings occurring as a result of uneven-aged management are generally less than 1 acre. Final harvest unit sizes for even-aged systems like shelterwood harvests are designed to be less than 40 acres. Past openings exceeding the 40-acre limit generally trace back to clearcutting in the 1960s and early 1970s prior to enactment of NFMA. Most are fully stocked with sapling or pole-sized trees and are no longer openings.

Output Performance. Timber resource outputs are measured in various ways including "acres treated" and "volume of material harvested" (in either cubic or board feet). Several key outputs are stated in the performance accomplishment report (PAR). PAR timber resource outputs for FY 07 are displayed in the table below:

Item	Measure	Planned	Accomplished	% Accomplishment
Reforestation/Planting	Acres	164	0	0
Reforestation Surveys	Acres	1729	934	54
Timber Volume Offer	CCF	21,000	27,492	131

Recommendations. No major changes need to be made to the Forest Plan. Suggested minor changes in the Forest Plan include:

- Change second sentence in Silviculture Standard #2 to read, “Even-aged, two-aged, or uneven-aged management systems can be used and applied...” The rationale for this change is to better reflect the various management systems and to be consistent with Table III-4 on the same page.
- Page IV-25, under Desired Conditions for Management-area Prescription 5.11, add “Suitable timberlands will be managed to provide a sustainable flow of forest products.” Though the production of forest products is mentioned in the Prescription Category 5 Discussion, and again under Theme and Setting for Management-area Prescription 5.11, the Desired Condition was omitted, even though this Management-area Prescription, along with Management-area Prescription 5.13, was modeled in the FEIS as part of the Forest's primary timberlands.
- Change the fourth Desired Condition, under the Forest Products Management-area Prescription on page IV-27, to “there are adequate old-growth components in forested stands.” The rationale for this change is to be consistent with MA 5.11.
- Continuing Forest-wide assessments of insect and disease infestation should occur to address the current outbreaks.

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APPENDICES

Appendix A: Rio Grande National Forest Monitoring & Evaluation Accomplishments

This appendix synopsizes the monitoring actions and results for FY 07. The monitoring items listed below correspond with the components listed in Table V-1 from the 1996 revised Forest Plan, as amended.

Monitoring Item	Method and (Contact)	Planned Locations	Monitoring Accomplished (what, where, results, summary, and references)	Evaluation (what are the recommendations based on monitoring? Are changes needed to the Forest Plan?)
Air Quality				
Monitor and evaluate (M&E) visibility, lake chemistry, and terrestrial systems [36 CFR 219.27 (a)].	(1) Photographic documentation of visibility; coordinate with NPS [L. Dobson].	Great Sand Dunes National Park.	Visibility and particulate monitoring was completed.	No changes in the Forest Plan recommended.
	(2) Chemistry of most sensitive lakes [K. Garcia, J. Fairchild, K. Murphy, L. Dobson].	3 lakes in the Weminuche Watershed (WA); 2 in the South San Juan WA; 2 in the La Garita WA; and 1 in the Sangre de Cristo WA.	Sampling was completed at all 8 lakes. These results are available to define current good conditions and appropriate control technology when new major polluting sources are proposed that could impact these wilderness areas.	No changes in the Forest Plan recommended.
	(3) Health of terrestrial systems such as lichen communities [L. Stewart]	3 sites from the baseline survey will be reassessed over time by measuring concentration of chemical elements to begin measuring trends.	No additional monitoring of lichen occurred on the Rio Grande NF in FY 99–07.	No changes in the Forest Plan recommended.
M&E burn plan [36 CFR 219.27 (a)].	Visual verification of smoke dispersal [L. Floyd, L. Dobson].	Several burns were completed.	One large prescribed burn of approximatley 1,200 acres was accomplished (Houselog) with good smoke dispersal. Stable atmospheric conditions existed throughout the burning period. No complaints were received from the public.	No changes in the Forest Plan recommended.
Assess air resources relative to (a) Forest-wide goals,	From monitoring results, conclude whether S&Gs and regulations are being followed, and if desired	As a result of monitoring all the above sites.	Forest management activities are following S&Gs; desired conditions are	No changes in the Forest Plan recommended.

Monitoring Item	Method and (Contact)	Planned Locations	Monitoring Accomplished (what, where, results, summary, and references)	Evaluation (what are the recommendations based on monitoring? Are changes needed to the Forest Plan?)
objectives, S&Gs; (b) MA prescription objectives, DCs, and S&Gs; (c) MA prescription allocations and monitoring methods [36 CFR 219.12 (k)].	conditions are being met [L. Dobson].		being achieved.	
Aquatic Resources				
M&E watershed disturbances [36 CFR 219.27].	Level I watershed assessment to measure total and connected watershed disturbance and compare to concern levels. Measure acres of disturbance in each 6th/7th level watershed. Use runoff curve numbers to equate all disturbances to an equivalent roaded area. Assess risk to watershed health from increased runoff [Hydrologists: L. Dobson and P. Reinholtz].	Timber sales: Burrow/Blowout	One larger timber sale that included watershed assessment was the Burrow Blowout Timber Sale. Small timber sales that relied on a programmatic EA or Categorical Exclusion (CE) included Ruston, Willow Aspen, McIntyre, and Cathedral Pine Beetle. No new watersheds of concern were discovered.	From past work it appears that concern levels for total watershed disturbance have been set at a conservative level to ensure adequate watershed health. No changes in the Forest Plan recommended.
M&E stream and riparian health [36 CFR 219.27a].	(1) Level III stream assessment on one stream per 6th level watershed for each EA analysis area. By comparing to a like reference stream, assess water quality, channel condition, and riparian function to measure amount, if any, of impairment [Hydrologists: L. Dobson and P. Reinholtz].	As described in the next collumn.	Stream health assessments were completed on numerous streams during timber and range EA or CE analysis: Burrow Blowout Timber Sale EA: Burrow Creek, Upper Jasper Creek and tributaries, Upper Bennett Creek. Rio de Los Pinos Timber Sale EA: tributaries to Rio de los Pinos. Conejos Peak Range EAs: Valdez Creek, Fox Creek, Conejos River. Divide Range EAs: Decker Creek, Upper Lake Fork. Localized bank instability was attributed in part to livestock use. Overall stream health was adequate to robust with some	Stream health direction in the Plan is appropriate. No changes in the Forest Plan recommended.

Monitoring Item	Method and (Contact)	Planned Locations	Monitoring Accomplished (what, where, results, summary, and references)	Evaluation (what are the recommendations based on monitoring? Are changes needed to the Forest Plan?)
			minor exceptions. Pass Creek continues to be fully protected from Wolf Creek Ski Area activities. East and West Willow Creeks and Windy Gulch were monitored as part of the Willow Creek mined land reclamation project. The Forest is participating with the Willow Creek Reclamation Steering Committee. Several streams were evaluated prior to fuel reduction projects including several tributaries to South Fork Rio Grande, Benny Creek and Taylor Canyon. The intent of these evaluations was to determine whether channels were currently healthy or whether they needed special protection as part of project implementation.	
	(2) Level III assessment to measure recovery of damaged streams over time. Compare changes in channel shape and composition to see if recovery is occurring with prescribed mitigation [Hydrologists: L. Dobson and P. Reinholtz].	Fox Creek Tributaries North Clear Creek Leopard Creek Million Area Stream Channels Pass Creek Tributary	Several stream channels within the Fox Creek/Big Meadows range allotments were evaluated to document recovery from drought and livestock utilization impacts noted during range EA evaluation in 2003. Improved conditions were documented. Upper North Clear Creek was evaluated in 2007 in association with range management. Evaluation includes several monumented photo monitoring points and a cross-section. These were undertaken to monitor recovery of unstable stream banks and possible impacts due to livestock grazing. Improvement was noted.	No changes in the Forest Plan recommended. Timber sale area revegetation is recovering well. Gully erosion has slowed in affected areas.
	(3) Level II stream assessment to see if watersheds of concern experience stream/riparian damage. Look for visible evidence of channel damage or	Streams within watersheds of concern that are identified during level I Watershed assessments.	No additional watersheds of concern were identified during FY 07.	No changes in the Forest Plan recommended.

Monitoring Item	Method and (Contact)	Planned Locations	Monitoring Accomplished (what, where, results, summary, and references)	Evaluation (what are the recommendations based on monitoring? Are changes needed to the Forest Plan?)
	water pollution. If visible evidence exists, document with a level II stream health assessment [Hydrologist: L. Dobson].			
Assess aquatic resources [36 CFR 219.12 (k)].	Visually determine if S&Gs have been implemented and are achieving the desired conditions [Hydrologist: L. Dobson].	Timber and range specialists routinely evaluate past and ongoing projects for compliance with Forest Plan direction.	Implementation monitoring occcured during timber sale and range allotment administration including: Road work for the County Line timber project; Finger Mesa small sale; S&Gs effective.	No changes in the Forest Plan recommended.
Biodiversity				
Monitor change in occurrence of selected native species (fine filter) [36 CFR 219.27 and .19 (6)].	(a) Ripley milkvetch: use plots and transects [CSU Ph.D. Candidate: J. Burt; Ecologist: D. Erhard].	Hick's Canyon and Terrace Reservoir.	Intensive plot monitoring completed by researcher J. Burt. Data collection and evaluation finished. Results indicate that the population demographics for this species are primarily influenced by moisture availability. Results also indicate that grazing by domestic livestock does not reduce *Astragalus ripleyi* population viability, at least in the short term. The recommendation is to avoid season-long grazing and to incorporate rotation-grazing schemes so that this species is not grazed at the same time of year every year.	No changes in the Forest Plan recommended. Based on the results of this study, the Forest has decided to end intensive monitoring of this species. The Forest will continue extensive monitoring.
	(b) Rio Grande cutthroat trout (RGCT), chub, and sucker (native fish population monitoring); utilize electrofishing and gill nets. [Forest Fish Biologist: B. Wiley; FS/BLM Seasonal Employees, CDOW].	Numerous streams and lakes across the Forest are monitored for population status, genetic purity, and whirling disease. Approximately 20% of the native fish streams are monitored yearly.	RGCT populations monitored in 2007 include: Big Springs Creek, Lake Fork Conejos, and Cat Creek. All population data were collected following CDOW protocols and entered into CDOW database. CDOW 2007 fisheries inventories Rio Grande Basin includes detailed analysis for these populations (unpublished). Rio Grande sucker inventories were conducted on Big Springs Creek and Lake Fork Conejos.	No changes in the Forest Plan recommended.

Monitoring Item	Method and (Contact)	Planned Locations	Monitoring Accomplished (what, where, results, summary, and references)	Evaluation (what are the recommendations based on monitoring? Are changes needed to the Forest Plan?)
	(c) Boreal toad: monitoring and survey [CDOW, FS].	Three existing sites were monitored (Jumper Creek , Trout Creek, and Boots Pond).	West Trout Crk again supported the highest number of individuals, with at least 5 adults, and 1000-2000 tadpoles. Five visits were made to the Jumper Crk site. No adults were noted at the Jumper site but 50-100 tadpoles. No toads were noted at Boots Pond.	No changes in the Forest Plan recommended.
	(d) Peregrine falcon: ocular surveys of nests [CDOW, FS].	8 known nest sites on Forest and 2 on other public lands within Forest administrative boundaries.	Of 8 known exisitng sites, one was monitored by FS. No CDOW monitoring reported. The one site monitored was occupied by both adults and had at least one downy chick in the eyrie in late June.	No changes in the Forest Plan recommended.
	(e) Southwest willow flycatcher [FS, USFWS, CDOW]	Mapped habitats on RGNF. Project-specific sites for range allotments were surveyed on a project-specific basis.	Surveys were conducted on one of 3 Districts, based on mapped habitat and project-specific range allotments. To date, no SWIFLs have been found on FS lands. Ground-truthing of habitat maps continued as a basis for future survey work. In-depth multi-year monitoring reports were completed by each District. Approximately 44% of the potential habitat on the RGNF has been surveyed to date, and categorized to a habitat classification. Suitable habitat comprises approximately 10% of the mapped habitat surveyed to date.	No changes in the Forest Plan recommended.
	(f) Black swift: surveys of nests [RMBO].	RGNF sites included in the state-wide Monitoring Colorado Birds (MCB) survey.	No information on black swift surveys was supplied by the RMBO in 2007. No change in status was reported for the RGNF, with eight breeding sites known on the RGNF. State-wide survey work continues to provide baseline data on population size and geographic (state-wide) distribution that will be needed to establish a (state-wide) population management plan. A local site on adjacent BLM lands was again used for banding of adults and young for a long-term assessment of productivity and survival.	No changes in the Forest Plan recommended.

Monitoring Item	Method and (Contact)	Planned Locations	Monitoring Accomplished (what, where, results, summary, and references)	Evaluation (what are the recommendations based on monitoring? Are changes needed to the Forest Plan?)
	(g) Bats: surveys [CDOW]	CDOW and FS bat surveys of known mine locations and sample sites on the Forest.	In FY07, bat surveys were conducted on the RGNFby the CDOW as part of the annual Bats In Abandoned Mines (BIMP) Project. Surveys for bats and use in abandoned mines was focused on the new Baca Mountain Tract north of Great Sand Dunes NP. The existence of a Townsend's big-eared bat maternity colony was confirmed. Other bat species documented at the Baca included western small footed bat (*M. ciliolabrum*), little brown bat (*M. lucifigus*), long-legged bat (*M. volans*), and big brown bat (*Eptesicus fuscus*). Two bat surveys were conducted by FS personnel in the Hot Creek RNA on the Conejos Peak RD. These surveys documented *Myotis volans*, *M. ciliolabrum*, and *E. fuscus*. The Townsend's maternity colony was estimated at 30-35 individuals by CDOW.	No changes in the Forest Plan recommended.
	(h) MIS birds [FS and RMBO]	Existing MCB and supplemental transects on the RGNF were included in the statewide MCB survey; project-specific inventories were conducted.	The Rocky Mountain Bird Observatory (RMBO) conducted the MCB program transects on the RGNF. Data were also collected by Forest personnel on the Forest supplemental transects designed to monitor Forest MIS avian species over time. MIS avian species were confirmed on the supplemental transects. Project-specific inventory results are incorporated into project analyses and data are recorded in unpublished reports and internal databases, such as NRIS FAUNA. Presence of MIS avian species were confirmed on proposed project sites on all districts.	No changes in the Forest Plan recommended.
	(i) MIS bird habitat [FS].	Available habitat on the Forest is estimated based on species habitat requirements and landtype associations (LTAs);	Habitats for MIS and FS Sensitive bird species have been modeled to establish an estimated baseline for avian MIS.	No changes in the Forest Plan recommended.

Monitoring Item	Method and (Contact)	Planned Locations	Monitoring Accomplished (what, where, results, summary, and references)	Evaluation (what are the recommendations based on monitoring? Are changes needed to the Forest Plan?)
		habitat availability is ground-truthed at the project level.	These habitat models and other GIS data sets were utilized during project-level surveys and analysis. Site-specific habitat availability and occupancy was documented through project inventories.	
	(j) Deer and elk [CDOW].	CDOW conducts population and harvest surveys by game management units (GMUs). CDOW models population estimates by data analysis units (DAUs).	Population estimates for mule deer in the Forest's 4 DAUs widely fluctuate over the last 20 years, but generally have not met herd objectives in each of the 4 DAUs. The population models conducted by the CDOW for 2007 indicates that one of the four deer DAUs that occur on or partially on the RGNF is estimated to be near objective (99%), while the others are at 38%, 49%, and 61% of objective. CDOW is currently managing mule deer to increase numbers. Population estimates for elk in the Forest's 4 DAUs widely fluctuate over the last 20 years, but are consistently above herd objectives. The population models conducted by the CDOW for 2007 indicates that all four elk DAUs remain above objective. One elk DAU is at 120% of objective, while the others are at 130%, 132%, and 296% of objective. CDOW is currently managing mule deer to increase numbers.	No changes in the Forest Plan recommended.
	(k) Deer and elk habitat [FS]	Habitat effectiveness is evaluated on a site-specific basis by project.	Mule deer and elk habitat, based on road densities, generally are considered in the mid-range Forest-wide, but may be variable on a site-specific basis by project. An analysis of road densities and road density effects was conducted for one project on the Divide RD using the R2 HabCap model road parameters. A comparison of alternatives was made to assist with the project decision.	No changes in the Forest Plan recommended.

Monitoring Item	Method and (Contact)	Planned Locations	Monitoring Accomplished (what, where, results, summary, and references)	Evaluation (what are the recommendations based on monitoring? Are changes needed to the Forest Plan?)
Monitor the change in selected species habitat (coarse filter) [36 CFR 219.27].	(a) Other EIS special-status plants. Photo interpretaion site visits, GIS, satellite imagery [Ecologist: D. Erhard].	Special-status plants are at various sites over the Forest.	A site visit was made to known *Draba smithii* sites (a Forest Service designated sensitive plant) and they appeared stable and secure. No new special status plants were found this year.	No changes in the Forest Plan recommended.
	(b) Snag-dependent species [FS].	Species inventories by project. Habitat is Forest-wide.	Observations of snag-dependent species were conducted in conjunction with some proposed projects. Local data were also collected during MCB program and supplemental MIS transects. Unusually high numbers of species such as American three-toed woodpeckers were again noted in association with bark beetles in spruce-fir forest types. Habitat monitoring is scheduled every 5 years.	No changes in the Forest Plan recommended.
	(c) Animal TEPS except those addressed above and those that can be coverd under the Riparian Wetland Objective [FS].	Species inventories by project or in cooperation with other agencies. Habitat is Forest-wide.	Species inventories were conducted in conjunction with proposed projects (raptor surveys were conducted within project areas to verify historical nest sites and current use, as possible). TEP surveys are ongoing (Canada lynx – CDOW; Uncomphagre fritillary butterfly – FWS; Mexican spotted owl and Southwestern willow flycatcher – FS, by project). Sensitive species surveys are by project or in conjunction with contracted surveys. RMBO and BBS surveys document presence of avian species on the Forest. Results for FY07 include: Lynx – after 6 years of successive releases, no additional animals were released in 2007. As of September 2007 the CDOW was still tracking 71 of the 120 reintroduced lynx that could still be alive. From the total of 218 animals. After several years of good reproduction, there were no dens or kittens found in 2007. Lynx were heavily using mature spruce-fir forests as primary habitat and foraging on their primary prey	No changes in the Forest Plan recommended.

Monitoring Item	Method and (Contact)	Planned Locations	Monitoring Accomplished (what, where, results, summary, and references)	Evaluation (what are the recommendations based on monitoring? Are changes needed to the Forest Plan?)
			species, snowshoe hare. Uncompahgre Frittilary Butterfly – Surveys in 2007 included additional inventories of the Conejos Peak site on the RGNF. However, no site visits resulted in the confirmation of any new UFB populations but an unconfirmed sighting is reported on the San Juan PLC. Ongoing qualitative monitoring of the eleven confirmed populations, icluding the 4 sites on the RGNF, indicated population persistence at all sites except one site located on the GMUG NF. The populations at 3 sites on the GMUG NF were again quantitatively sampled using previously placed transects to produce estimates of population size. Draft population estimates and trend analysis were conducted. Conservation issues (trespass cattle) were reported for one site on the RGNF. Mexican Spotted Owl – MSO surveys were conducted in the Hot Creek RNA on the CP District. This was a first year survey conducted by certified MSO surveyors which utilized U.S. Fish and Wildlife Service MSO survey protocol. No MSOs or response was detected. Surveys will be conducted again during the 2008 field season. The bald eagle was officially de-listed in August 2007. This species will no longer be included on the Forest TEP list but will remain a R2 sensitive species. In 2007, one mammal species – Rocky Mountain bighorn sheep (Ovis canadensis canadensis) - was added to the R2 sensitive species list. The current total on the RGNF involves 29 species – I invertebrate, 2 amphibians, 7 mammals, and 19 birds. Opportunistic surveys for	

Monitoring Item	Method and (Contact)	Planned Locations	Monitoring Accomplished (what, where, results, summary, and references)	Evaluation (what are the recommendations based on monitoring? Are changes needed to the Forest Plan?)
			some of these species were conducted based on a project-specific basis. Habitat monitoring is scheduled every 10 years and will be reported in the appropriate evaluation report.	
Monitor changes in composition, structure, and pattern for each LTA [36 CFR 219.27].	Photo interpretation, GIS, satellite imagery, and/or spatial analysis [Ecologist/Wildlife Biologist].	All LTAs over the entire Forest.	No monitoring was required this year. This item is evaluated once every 10 years and was accomplished in 2006.	No changes in the Forest Plan recommended.
Validate the vegetation composition and structure of LTA 1 reference landscapes [36 CFR 219.27].	Photo interpretaion, GIS, satellite imagery, and/or site visit [Ecologist: D. Erhard].	14 reference areas within Englemann spruce on Mountain Slopes LTA. Found throughout the upper elevations of the Forest.	The IRI Center has completed the contract mapping and attributing of Common Vegetative Unit (CVU) polygons on the Forest. The updated vegetation data is being used in relevant spatial analysis work, where feasible, and within the scope of the original modelling concept.	No changes in the Forest Plan recommended.
Monitor changes in CNHP Significant Plant Communities listed in EIS [36 CFR219.27].	Photo interpretaion, site visits, GIS, and/or satellite imagery [Ecologist: D.Erhard].	Special-status plant communities are at various sites over the entire Forest.	Several Colorado Natural Heritage Program (CNHP) plant communities of special interest were visited as follows: (1) *Alnus incana* / *Cornus sericea*; (2) *Salix monticola* / *Calamagrostis canadensis* and (3) *Populus angustifolia* / *Salix exigua*. The sites appeared stable and there were no apparent threats.	No changes in the Forest Plan recommended.
Monitor the progress of old-growth (Mehl 1992) inventory and reconnaissance on the Forest.	Ocular, plots, GIS, and/or satellite imagery [Ecologist, Wildlife Biologist, Forester].	Forest-wide.	Old-growth inventories were completed for the following projects: Alder Creek Prescribed Fire; Buffalo Pass Prescribed Fire; Burrow Blowout Timber Sale; Cathedral Pine Beetle Salvage Project; Embargo Fuels Treatment; McIntyre Gulch Fuels Reduction; Mill Creek Prescribed Fire; and Powderhouse Prescribed Fire. To date, old growth (Mehl 1992) remains uncommon. On the Divide and Conejos Peak Ranger Districts, old growth appears to be limited due to a lack of patchiness, lack of structural diversity,	No changes in the Forest Plan recommended. The Forest continued its progress toward inventorying old growth this year.

Monitoring Item	Method and (Contact)	Planned Locations	Monitoring Accomplished (what, where, results, summary, and references)	Evaluation (what are the recommendations based on monitoring? Are changes needed to the Forest Plan?)
			and/or net productivity being too high. Because the Mehl criteria are biased toward more productive sites, the Saguache Ranger District appears to generally lack the productive capability to meet the Mehl old-growth descriptions.	
Evaluate biodiversity and wildlife [36 CFR 219.12 (k)].	Ocular, plots, transects [Ecologist, Wildlife Biologist].	Forest-wide.	The ecologist and District biologists visited more than 20% of the Forest's ongoing projects in conjunction with biological assessments and evaluations. Monitoring did not indicate that biodiversity items in 36 CFR 219.12 (k) were in need of change.	No changes in the Forest Plan recommended.
Fire and Fuels Management				
Assess fire/fuels [36 CFR 219.12 (k)].	Ocular estimates using photo guides for estimating downed woody fuels. Fuel transects and surveys to determine actual loading and arrangement. Onsite inspections [AFFMO, Ecologist, and Silviculturist].	Ponderosa pine and mixed-conifer cover types (fire regimes 1 & 3, condition class 2 & 3), Forest-wide. Wildland/urban interface/intermix (WUI) areas.	Analysis and evaluation of fuel profiles (loading, arrangement, continuity) was conducted in various mid to low elevation areas (mixed conifer, ponderosa pine, Douglas fir) of the Cochetopa Hills, the Alamosa and Upper Rio Grande River drainages, Shillings Springs area and in the Conejos River drainage. Treatment methods (Rx fire, mechanical) have been developed and appropriate project plans (i.e., burn plans, thinning/mastication plans) have been implemented. Monitoring of WUI and non-WUI projects indicated treatment objectives were met. WUI project planning continues in the Kerber, Bonanza, Conejos River, and South Fork areas. Environmental conditions (short burn windows) inhibited ability to apply prescribed fire in FY 07.	Continue focus on WUI areas and Fire Regimes 1 & 3 in Condition Classes 2 & 3. No changes in the Forest Plan recommended.
General Infrastructure				
Assess facilities for compliance with state and Federal	(1) Inspect dams, facilities, drinking water, road and trail bridges, and FDRs for safety and	50% of Forest road bridges; each high-hazard dams every 3 years; each medium-low hazard	50% of bridges inspected in FY 07. No high hazard dams are located on the	No changes needed in Forest Plan monitoring requirements. Inspections and testing will

Monitoring Item	Method and (Contact)	Planned Locations	Monitoring Accomplished (what, where, results, summary, and references)	Evaluation (what are the recommendations based on monitoring? Are changes needed to the Forest Plan?)
requirements and FS Handbook/Manual direction.	maintenance [Forest Engineer].	dams every 5 years; 25% of all trail bridges; 25% all drinking-water systems as required by the Safe Drinking Water Act; 20% of all facilities and 20% of all Level 3, 4, and 5 roads as required by programs/per FSH and FSM.	Forest: all moderate and low hazard dams were inspected in FY 06. All trail bridges were inspected in FY 05. 100% of facilities were inspected in 5 year FY02-FY 07 period. 100% of water and wastewater systems were inspected in 5 year FY02 – FY07 period. Level 3, 4, and 5 road inspections were determined by random statistical sample in FY07. All assigned targets were inspected in FY07. Infrastructure safety and maintenance monitoring goals were met for FY 07.	continue as outlined.
	(2) On-site inspections to monitor compliance with Travel Management Plan [Law Enforcement Officers (LEOs), District Level II Officers, and other personnel as assigned].	Various locations around the Forest as patrolled by Forest LEOs and other Forest Personnel.	Inspections were conducted through hunter patrols and day-to-day contacts by LEOs and other FS personnel. Numerous issues were raised and some citations issued. Forest continues to seek compliance with the current travel management plan as the MVUM is being developed.	No changes in the Forest Plan recommended.
	(3) Assess planned road closures through onsite inspections [Engineering and Timber].	Various locations across the Forest.	Onsite inspections made by Forest Personel of proposed illegal route closures. In the fall of 2006 (FY 06), the Forest conducted an onsite investigation to evaluate illegal route closure activities. Each District had implemented a combination of treatments that effectively closed illegal routes. The treatments included subsoiling, installing carsonite or cedar closure posts and signs, brushing in illegal routes, and physical rock barriers. The ultimate success of such treatments is determined over time. Additional evaluation will be made in FY 07 to determine how well the hunters and other recreationists complied with the closures.	No changes in the Forest Plan recommended.

Monitoring Item	Method and (Contact)	Planned Locations	Monitoring Accomplished (what, where, results, summary, and references)	Evaluation (what are the recommendations based on monitoring? Are changes needed to the Forest Plan?)
M&E infrastructure [36 CFR 219.12 (k)].	Review and monitor infrastructure-related inspections and reports for compliance with Forest Plan guidelines and objectives [Forest Engineer].	As outlined in the Infrastructure section of the AMOP.	50% of bridges inspected in FY 07. No high hazard dams are located on the Forest: all moderate and low hazard dams were inspected in FY 06. All trail bridges were inspected in FY 05. 100% of facilities were inspected in 5 year FY02-FY 07 period. 100% of water and wastewater systems were inspected in 5 year FY02 – FY07 period. Level 3, 4, and 5 road inspections were determined by random statistical sample in FY07. All assigned targets were inspected in FY07. Infrastructure safety and maintenance monitoring goals were met for FY 07.	No changes in the Forest Plan recommended.
Health and Safety				
M&E Forest activities with respect to National Health and Safety Codes and Occupational Safety and Health Administration guidelines.	Review and monitor guidelines on public safety and health [Forest Engineer/Safety Officer].	Forest.	All contract Notice To Proceed meetings include a safety review. Road crew tailgate meetings are held weekly and include project work zone safety requirements discussion. Road crew supervisor ensures compliance. Monthly safety meetings are held to discuss accidents and near misses. Facilities safety inspections were completed in FY 07.	No changes in the Forest Plan recommended.
Heritage (Cultural) Resources				
M&E projects to assure heritage resources have been appropriately	Onsite inspection of selected highly significant heritage resources. Onsite inspection of National Register-eligible heritage resources identified for protection	Identified highly significant heritage resources including open lithic sites, rock art, and prehistoric stone structures. Historic buildings are also	Highly Significant Prehistoric Heritage Resource sites not associated with a project monitored in FY 07: 5RN330, Dog Mountain Petroglyphs; 5HN55, Black Mountain Folsom Site. 5RN323, Sentinel	No changes in the Forest Plan recommended.

Monitoring Item	Method and (Contact)	Planned Locations	Monitoring Accomplished (what, where, results, summary, and references)	Evaluation (what are the recommendations based on monitoring? Are changes needed to the Forest Plan?)
protected.	during ground-disturbing project-related activities [Heritage Specialist: V. Spero].	included. Heritage resources located on selected range allotments, timber sales, and/or prescribed fire projects.	Mountain stone structures. Historic Heritage Resources Monitored: Alder Guard Station, 5RN417 Elwood Guard Station, 5RN686; Bonifacio Gulch stone structures, and site 5RN488; the Lizard Man Rock Art Site. Project-related heritage sites monitored included: Platoro Range Allotment: 5CN840, 5CN841, 5CN842, 5CN843, and 5CN844; Embargo Range Allotment; 5ML63, 5ML64, 5ML65, 5ML66, 5ML67, and 5ML68; and the Alder Ranger Station; 5RN427. Results: All prehistoric and historic heriatge reources monitiored were reported to be in good condition. No major impacts are occurring.	
M&E consultations with American Indians.	Assess proposed management activities and programs to determine if American Indian consultation was accomplished [Heritage Specialist: V. Spero].	Review proposed project EAs where there is a potential for sites or geographic features that are, or have the potential to be, considered culturally sensitive to American Indians.	In FY 07 Tribal consultation was initiated by individual project scoping letters and by the RGNF Quarterly Scoping Document (SOPA).	No changes in the Forest Plan recommended. The Tribal Consulation Bulletin (TCB) should be issued as the initial Tribal contact for major projects or those smaller proposals with the potential to affect areas that are culturally sensitive to consulted America Indian Tribes.
M&E heritage resource program [36 CFR 219.12 (k)].	Review of all Heritage Resource reports done in FY 07 [Heritage Specialist: V. Spero].	Review of all Heritage Resource reports done in FY 07.	Reports for proposed projects sent to the Colorado State Historic Preservation Officer for concurrence were reviewed.	No changes in the Forest Plan recommended. Proposed projects comply with 36 CFR 219.2 (k).
Minerals				
M&E oil & gas activities so effects do not exceed predicted by 10%.	Compare annual and cumulate OG activity [Minerals Specialist].	Forest summary.	There was no oil & gas development on the Forest in 2007. The Forest Plan reasonable and forseeable development scenario and its efects are still valid as described in the Forest Plan.	No changes in the Forest Plan recommended.

Monitoring Item	Method and (Contact)	Planned Locations	Monitoring Accomplished (what, where, results, summary, and references)	Evaluation (what are the recommendations based on monitoring? Are changes needed to the Forest Plan?)
Verify if areas are compatible with FP stips. Assess if occupancy could be allowed on the lease tract [36 CFR228.1.2 (e) 1,2,3].	Verification form [Minerals Specialist].	Each lease.	There was no oil and gas development on the Forest in 2007. The Forest Plan reasonable and forseeable development scenario and its efects are still valid as described in the Forest Plan.	No changes in the Forest Plan recommended. No additional analysis is needed.
M&E minerals program [36 CFR 219.12 (k)].	Onsite inspections of mineral activities; review reports [Minerals Specialist].	Forest Summary.	The Superior Mill, Bonanza Mining District, was reclaimed according to Forest Plan standards. The Forest Plan is an effective tool for protecting resources while allowing mineral development.	No changes in the Forest Plan recommended. No additional analysis is needed.
Noxious Weeds				
M&E noxious weeds [36 CFR 219.12 (k)].	Monitoring of noxious weeds (where and to what extent they are present) will be reported based on the evaluation of control methods on infested areas on the forest/BLM [Valley Wide Weed Coordinator].	Inventory efforts focused primarily on FDR road systems. Treatment is continuing within the South San Juan Wilderness and inventories are being conducted within the Weminuche Wilderness and inventories are on going for the Baca Tract in the Sangre De Cristo Mountains, to locate and control infestation of yellow toad flax and canada thistle. Treatment continues on all three districts and on BLM Lands Ajacent to the Forest at known infestion sites.	Forest-wide inventories were conducted on all three Ranger Districts and ajacent BLM in 2007. Specific information on species found and areas infested and treated/inventoried can be found in Ranger District records. 325 acres were treated by chemical and biological control means on the Forest and 250 acres on BLM.	No changes in the Forest Plan recommended.
Assess the extent of infestation and control methods of noxious weeds.	Monitor noxious weed infestations and control methods by using on-the-ground surveys.	See above.	The Forest and BLM have combined funding to hire a Valley wide Weed Coordinator to ensure a more coordinated treatment effort on Public Lands under jurisdiction	No changes in the Forest Plan recommended.

Monitoring Item	Method and (Contact)	Planned Locations	Monitoring Accomplished (what, where, results, summary, and references)	Evaluation (what are the recommendations based on monitoring? Are changes needed to the Forest Plan?)
Range				
M&E range program [36 CFR 219.12 (k)].	Refer to monitoring items that follow (see below).	See below.		
M&E rangeland seral stage to ensure the desired conditions.	(1) Various methods and techniques will be derived from RAMTG [Primary: G. Snell; Secondary: T. Post].	Cumbres, Canon, NSJ Wilderness allotments, Platoro, Decker, Park Mesa, Saguache Park, Cochetopa Hills.	Aproximately 30,000 acres were identified and 8 cover frequency transects and utilization cages were installed on the Forest.	No changes in the Forest Plan recommended.
	(2) Monitor desired condition for trend [Primary: G. Snell; Secondary: T. Post, Kelly Garcia, L. Van Amburg, M. Swinney].	See above.	See above.	No changes in the Forest Plan recommended.
Assess rangeland suitability.	(1) Evaluate suitability of Forest Plan rangelands. Intensive review at site-specific areas while applying criteria for capability and ID Team determination of suitability [Primary Contact: G. Snell; Secondary: T. Post, K. Garcia, M. Swinney].	A rangeland suitability determination by specific allotments was undertaken for NEPA as per R2 RAMTAG.	Rangeland suitability assessments were initiated in 2005 and continued into 2007.	No changes in the Forest Plan recommended.
	(2) Evaluate suitability of rangelands at the AMP level [Primary Contact: G. Snell; Secondary: T. Post, K. Garcia, M. Swinney].	See above.	See above.	No changes in the Forest Plan recommended.
Monitor utilization of rangelands.	Various mehods will be used including: P/U cages, height-weight, stubble height, and ocular estimates [Primary Contact: G. Snell; Secondary: K. Garcia, T. Post, M. Swinney].	Each district will conduct analysis based on Forest Priority Rescission Act Allotments.	Monitoring for vegetation utilization was conducted on all 3 ranger districts. About 250,000 acres were monitored for vegetation utilization. Various methods were used, including P/U cages, height-weight, stubble height measurements, and ocular estimates. Allotments monitored by ranger districts were the same as the planned locations in previous column.	No changes in the Forest Plan recommended.

Monitoring Item	Method and (Contact)	Planned Locations	Monitoring Accomplished (what, where, results, summary, and references)	Evaluation (what are the recommendations based on monitoring? Are changes needed to the Forest Plan?)
Recreation – Developed				
Assess developed sites for (a) visitor expectations, trends, and customer satisfaction; and (b) quality and safe facilities.	(1) Customer survey; Forest-wide Market and Customer Survey [Forest and District Recreational Personnel].	Forest-wide.	A Forest-wide customer survey completed in FY 05. Information from the FY 05 customer survey on the Rio Grande NF is on the website at http://www.fs.fed.us/recreation/recuse/recuse.shtml.	No changes in the Forest Plan recommended.
	(2) Annual Developed-site Hazard Tree Inspections. Inspection of Forest's campgrounds and picnic areas for removal of hazard trees [I&D Specialist and District Recreation/Timber Personnel].	Campgrounds and picnic areas.	Annual hazard tree inspections of campgrounds and picnic areas were completed as part of the sites' preseason maintenance inspections. Hazard trees were marked and removed in FY 06. Hazard tree inspection reports are on file at ranger district offices. In addition, water sampling for safe drinking water is completed on a monthly basis.	No changes in the Forest Plan recommended.
	(3) Monitor ski area summer and winter activities. Monitor Wolf Creek Ski Area for compliance with approved summer/winter operating plans [S. Brigham].	Wolf Creek Ski Area.	FY 07 winter and summer operating plans were developed and approved and monitoring inspections made. Inspection reports are on file at the Divide Ranger District office. Winter inspections included lift operations, ski patrol operations and procedures, avalanche procedures and operations, ski school operations, annual billings and payments and the monitoring of the cross country ski trail and use. Continued activities include: construction of the new parking area access road and erosion control work in the vicinity of the parking lots.	Continue to work with the ski area in conjunction with planned projects. No other changes in the Forest Plan recommended.

Monitoring Item	Method and (Contact)	Planned Locations	Monitoring Accomplished (what, where, results, summary, and references)	Evaluation (what are the recommendations based on monitoring? Are changes needed to the Forest Plan?)
	(4) Monitor special-use permits. Inspections documented and/or inspection reports MAR 62.5 [Forest and District Recreation Personnel].	Forest recreation residences, outfitter guides (O/G), recreation events, and concession permits.	Annual billings and issuance of special use permits is now done in SUDS. The Forest continued to administer a majority of its special use permits in FY 07.	A screening checklist is also required when determining whether to permit recreation events for compliance with FSM2721.49, FSH 1909.15, 30.3-2 and the terrestrial BA/BE. No other Forest Plan changes are recommended.
Assess developed sites actual use compared with projected outputs [36 CFR 219.12 (k)].	Use figures collected by concession campground managers and FS campground hosts in our fee campgrounds.	All concession and FS campgrounds and picnic sites.	Campground use and occupancy rates were recorded in our Forest concession campgrounds by the concession managers. Use reports are on file at the Forest's Supervisor Office. The Saguache District does not have concession campgrounds. Three rental Granger-Thye Act cabins were maintenance and fee collection is completed force account. The Forest initiated work on the Recreation Site Facilities Analysis and reviewed occupancy rates for developed fee sites.	No changes in the Forest Plan recommended.
Evaluate developed recreation [36 CFR 219.12 (k)].	Comparative evaluation for M&E report [Forest and District Recreation Personnel].	Forest-wide developed-recreation prescription areas.	Forest recreation objectives, Forest-wide standards, Recreation Management Area standards, desired conditions, S&Gs and monitoring were assessed in conjunction with proposed project assessments. The Forest initiated work on the Recreation Site Facilities Analysis. A five year program of work is scheduled for completion in FY-08	No changes in the Forest Plan recommended. We will plan to monitor this element in FY 08.
Recreation – Dispersed				
Evaluate traditional and nontraditional recreation opportunities.	(1) Trail log inventory using GPS (MAR 62.3, 64.3) [Forest Trails Specialist and District Trail Coordinators].	10–15% of Forest trails.	By FY 07, approximately 90% of all Forest trails were inventoried for and entered into INFRA. No additional trail work was completed in FY-07.	No changes in the Forest Plan recommended.

Monitoring Item	Method and (Contact)	Planned Locations	Monitoring Accomplished (what, where, results, summary, and references)	Evaluation (what are the recommendations based on monitoring? Are changes needed to the Forest Plan?)
	(2) Monitor representative watersheds to assess baseline capacity allocation. Monitor the amount of public and outfitter/guide use occurring in identified watersheds [Forest and District Recreation Personnel/RSST].	Forest-wide compartments.	Commercial capacity is monitored in all compartments and there are several compartments indicating over-allocation, these will evaluated on permit re-issuance. Capacity associated with public use and is random and limited most information associated with wilderness registration.	We will look at our calculations to determine if our baseline figures are correct and if so, what management actions might be needed. No other changes in the Forest Plan recommended.
Monitor effects of off-road vehicle use of Forest trails and roads [36 CFR 295.5].	Assess impacts to physical, biological, and social resources (indicators) [Forest Recreation Specialist/RSST].	Hunter patrols during hunting season.	Hunter patrols were implemented again during the hunting season. Patrols indicate we are getting high levels of use and impacts off designated roads and trails. The Forest emphasized monitoring of afternoon big game retrieval. This will continue in FY08.	No changes in the Forest Plan recommended. The Forest is working on the publication of District Motor Vehicle Use Maps. Future travel management planning efforts are planned.
Evaluate dispersed recreation [36 CFR 219.12 (k)].	Comparative evaluation for M&E report [Forest and District Recreation Personnel].	Forest-wide dispersed Rx areas.	Forest dispersed-recreation objectives, Forest-wide standards, management area S&Gs and guidelines, desired conditions and monitoring were assessed in conjunction with proposed project assessments.	No changes in the Forest Plan recommended. We will plan to monitor this element in FY 09.
Recreation – Unroaded Areas				
Assess the physical, biological, and social resources within backcountry areas.	Assess the impacts on the physical, biological, and social resources (indicators) [Forest Recreation Specialist and RSST].	Forest-wide backcountry areas.	The Forest worked with the Regional Office to support the State of Colorado Roadless Rule Environmental Impact Statement. This work included corrections made to mapping errors.	No changes in the Forest Plan recommended at this time pending the completion of the Colorado Roadless Rule Environmental Impact Statement.

Monitoring Item	Method and (Contact)	Planned Locations	Monitoring Accomplished (what, where, results, summary, and references)	Evaluation (what are the recommendations based on monitoring? Are changes needed to the Forest Plan?)
Evaluate backcountry areas [36 CFR 219.12 (k)].	Comparative evaluation for the M&E report [Forest and District Recreation Personnel].	Forest-wide backcountry areas.	Forest backcountry area objectives, Forest-wide standards, management area S&Gs, desired conditions and monitoring were assessed by district staff. The 2001 Roadless Area Final Rule was replaced by the 2005 Roadless Rule. The 2005 Roadless Area Rule allows states to petition the Secretary of Agriculture on roadless area management. The State of Colorado completed the Colorado State Roadless Review Process in 2006. Mapping errors in the backcountry boundaries have been corrected during the initial work to support the Colorado roadless rule EIS.	Corrections to the Forest Plan map for roadless area boundaries were submitted for the Colorado roadless rule EIS that is in progress.
Recreation – Wild and Scenic Rivers				
Assess the physical, biological, and social resources within wild and scenic river corridors.	Assess impacts on the physical, biological, and social resources (Indicators) [Forest/district Recreation Personnel and Core Team].		The enactment of P.L. 106-530, the Great Sand Dunes National Park and Preserve Act, created the need for the Forest Plan to be amended to address the changes to the Wild and Scenic River section of the Forest Plan in addition to the map correction changes to Forest Plan map and Forest travel maps. No wild and scenic river corridors were monitored in FY 07.	The Forest Plan will need an amendment (pages IV-17 and IV-22) to address the Forest boundary and management changes due to the Act. The Wild and Scenic River changes and corrections to the Forest Plan map will be addressed in the Baca Mountain Tract Amendment in FY 08. No other changes in the Forest Plan recommended.
Evaluate Wild and Secnic River MA prescription objectives, desired conditions, and S&Gs [36 CFR 219.12 (k)].	Comparative evaluation for the M&E report [Forest and District Recreation Personnel].	Forest-wide Wild and Scenic River MA.	The Wild and Scenic River standards, desired conditions, allocation and monitoring were reviewed.	No changes in the Forest Plan recommended.

Monitoring Item	Method and (Contact)	Planned Locations	Monitoring Accomplished (what, where, results, summary, and references)	Evaluation (what are the recommendations based on monitoring? Are changes needed to the Forest Plan?)
Recreation – Wilderness				
M&E visitor-use levels and other wilderness resources [36 CFR 293.2].	Schedule for implementation those priority 1 items outlined in each wilderness area Wildeness Implementation Schedule. Surveys, data gathering, and reports [District Wilderness Coordinators, Wilderness Rangers, and Resource Specialists).	South San Juan, Weminuche Sangre d Cristo and La Garita Wilderness Areas.	With the enactment of P.L. 106-530, the Great Sand Dunes National Park and Preserve Act, documented changes need to be written that addresses the changes to the Wilderness section of the Forest Plan in addition to the map correction changes to the Forest Plan map. Fish stocking in wilderness areas was previously addressed through the Wilderness Management Direction EA. A typographical error in the Forest Plan regarding stocking of indigenous fish in wilderness was corrected with an errata sheet. In the La Garita Wilderness, Saguache implented new special orders and high lake water sampling for air quality. The Sangre de Cristo area is continually monitored by the recreation staff in Saguache.	The Forest Plan needs to address the wilderness area (Sangre de Cristo) changes affected by P.L..106-530) and make corrections to the Forest Plan map. This is expected to be accomplished through the Baca Mountain Tract Amendment in FY 08. The wilderness team is assessing those compartments where some standards have been exceeded and developing recommended management actions. No changes are needed to the monitoring indicators outlined in the wilderness EA.
Evaluate wilderness Forest-wide goals, objectives, S&Gs, and wilderness MA objectives, desired conditions, and S&Gs [36 CFR 219.12 (k)].	Comparative evaluation for the M&E report [Forest Recreation Specialist and District Wilderness Coordinators].	Forest-wide wilderness MAs.	The wilderness team has prioritized and monitored wilderness compartments to evaluate whether standards are being met or exceeded.	Continue to monitor wilderness compartments in FY 08.
Research and Information Needs				
Determine progress of accomplishing needed research [Items listed on the top of page V-16 of the Forest Plan].	Questionnaire [Forest Staff].	Poll Forest resource specialists on progress.	Progress is continuing on (1) watershed-based inventories for old growth in conjunction with proposed timber harvest activities; (2) Forest roads inventories; and (3) collection of floral and faunal occurrence data for inclusion in the Colorado Natural Heritage Program Biological Database. Under the National Resource Information System (NRIS), a	No changes in the Forest Plan recommended.

Monitoring Item	Method and (Contact)	Planned Locations	Monitoring Accomplished (what, where, results, summary, and references)	Evaluation (what are the recommendations based on monitoring? Are changes needed to the Forest Plan?)
			civil rights project is ongoing to develop methods of identifying under-served communities.	
Research Natural Areas (RNAs)				
Evaluate RNAs [36 CFR 219.12 (k)].	Ocular, plots, transects, GIS [Ecologist: D. Erhard].	Designated RNAs.	The Deadman RNA was visited and visually evaluated. The majority of the RNA appears to be minimally impacted by human activity. Natural processes are the prevailing influence. There was no evidence of any conflict with 36 CFR 219.12 (k).	No changes in the Forest Plan recommended.
Scenic Resources				
Determine if project scenic integrity objectives (SIOs) were met. Assess changes in SIO with respect to ROS.	Onsite or photo-point monitoring [Landscape Architect: K. Ortiz].	Projects where scenic resources is a key issue, and special areas such as campgrounds, gravel pits, and utility sites.	Many of the sites monitored for 2007 are the same sites monitored in 2006 (relative to meeting SIOs). *Wolf Creek Ski Area*: site visits showed that the new exterior entrance walls were not in compliance with the SIOs for the site. The color does not borrow from the characteristic landscape. Consultation continues with the Wolf Creek Ski Area operator to make the necessary changes. *Mountain Lion/Lookout Timber Sale*: there are notable contrasts during the winter months on the landscape as viewed from the highway. This area will continue to be monitored. *Hwy. 160 Project*: some rock walls do not come into compliance with SIOs, since pre split holes can be seen. These will continue to be monitored. *Windy Point to Lonesome Dove phase of the Hwy 160 Project*: this area will continue to be monitored. The Village at Wolf Creek access analysis identified the need to change the SIO at the Wolf Creek Ski Area to make it compatible with the existing visual situation.	No changes in the Forest Plan recommended.

Monitoring Item	Method and (Contact)	Planned Locations	Monitoring Accomplished (what, where, results, summary, and references)	Evaluation (what are the recommendations based on monitoring? Are changes needed to the Forest Plan?)
			The *County Line Timber Sale* is currently not in compliance due to blowdown. This area will be monitored throughout 2008 for any changes to Scenic Resources.	
Determine if SIOs were met. Assess Constituent Survey information.	Constituent surveys, visitor observations, interviews, and public participation [Landscape Architect: K. Ortiz].	Ranger district roads, trails, and recreation sites.	Constituent surveys were not completed in FY 07, since the surveys are awaiting Washington Office approval.	No changes in the Forest Plan recommended.
Evaluate scenic resources [36 CFR 219.12 (k)].	Summarize report.	Forest.	Three separate areas were monitored for scenic resource compliance during FY 07. Under the terms of scenic resources, all areas have 2 years to come into compliance with the SIOs for any area after project implementation. These projects will continue to be monitored over the next year.	No changes in the Forest Plan recommended.
Soil Productivity				
Assure that land productivity is maintained or improved.	(1) Monitor soil quality standards [(Soil Scientist: J. Rawinski)	Antelope Sale monitoring	This area is in properly functioning condition.	No changes in the Forest Plan recommended. Standards and assessments are adequately working.
	(2) Use erosion model to predict erosion or analyze projects after completion [Soil Scientist: J. Rawinski].	Used WEPP in Burro-Blowout Timber sale		No changes in the Forest Plan recommended.
	(3) Ocular estimates, pace transects, on-site, professional judgements to monitor fertility, erosion, mass movement [Soil Scientist: J. Rawinski].	Provided on a number of timber and range projects.		No changes in the Forest Plan recommended.
	(4) Mass-movement evaluation by monitoring existing and potential problem areas [Soil Scientist: J.	Did not get out to inspect this. However, no new reports of new activity.		No changes in the Forest Plan recommended.

Monitoring Item	Method and (Contact)	Planned Locations	Monitoring Accomplished (what, where, results, summary, and references)	Evaluation (what are the recommendations based on monitoring? Are changes needed to the Forest Plan?)
	Rawinski].			
M&E reclamation and revegetation efforts [Soil Scientist, J. Rawinski].	Onsite and/or randomtransects, review district project records and erosion models [Soil Scientist: J. Rawinski].	California Gulch.	Monitored the application of watershed restoration techniques and progress.	No changes in the Forest Plan recommended.
M&E soil productivity [36 CFR 219.12 (k)].	Project results, field reviews, data analysis, and modeling results [Soil Scientist: J. Rawinski].	Conducted numerous soil analyses through project work	Burro-Blowout, North Saguache range allotments.	No changes in the Forest Plan recommended.
Special Interest Areas (SIAs)				
Assess protective measures and interpretive efforts.	Ocular surveys [Ecologist: D. Erhard; Heritage Resource Specialist: V. Spero].	SIAs.	The botanical area at Hick's Canyon was visually inspected. *Astragalus ripleyi* plants appear to be vigorous and robust. No new concerns were noted.	No changes in the Forest Plan recommended.
Evaluate Special Interest Areas [36 CFR 219.12 (k)].	Summarize reports or information from districts [Ecologist: D. Erhard; Heritage Resource Specialist: V. Spero].	SIAs.	The botanical area at Hick's Canyon was evaluated for this component. Monitoring did not reveal that this SIA for items in 36 CFR 219.12 (k) were in need of change.	No changes in the Forest Plan recommended.
Assess protective measures and interpretive efforts.	Ocular surveys [Heritage Resource Specialist: V. Spero].	SIAs.	The Wagon Wheel Gap Watershed Experiment Station SIA (Historical) was visually monitored in FY 07. There were no noticeable impacts relating to the area noted during the SIA review.	No changes in the Forest Plan recommended.
Timber				
Restocking of harvest areas [36 CFR 219.12].	Stocking surveys [Silviculturist: B.Short].	All locations/sites planned for 1st-, 3rd-, and/or 5th-year surveys.	In 2007, a total of 934 acres were surveyed for or certified as being fully stocked within the Million Fire Area	Restocking of harvest areas will continue to be monitored [36 CFR 219.12].
Assess timber suitability [36 CFR 219.12; 219.27].	(1) Standard suitability determination at Forest-wide level [Analyst/Silviculturist].	Assessing timber suitability.	Forest-wide suitability assessments were not planned or completed in 2007. Suitability assessments were completed at the landscape or project levels for the Burro/Blowout, Ruston Aspen, and Big Lake areas.	Continue to assess timber suitability at the project level [36 CFR 219.12; 219.27].

Monitoring Item	Method and (Contact)	Planned Locations	Monitoring Accomplished (what, where, results, summary, and references)	Evaluation (what are the recommendations based on monitoring? Are changes needed to the Forest Plan?)
	(2) Onsite inspection, inventory/growth-yield exams, soil sampling [Silviculturalist: B. Short, Foresters and/or Technicians; Timber Sale Administrators: R. Dressel, T. Murtaugh; Soil: J. Rawinski].	Pre-sale: County Line, Handkerchief Mesa, Blowout Mountain. Harvest Operations: Shaw Lake, Antelope, and Rock Creek.	Areas within the County Line Analysis Area, Rock Creek Analysis Area and Handkerchief Mesa Analysis Area were analyzed. No areas identified in the Plan as suitable for timber production were identified as being unsuitable. One area on Handkerchief Mesa where the Forest Plan will be amended to correct a MAP mapping error, lands were assessed and found to be suitable for timber production. These areas will be added to the suitable timber base upon completion of the Forest Plan amendment.	Continue to assess timber suitability at the project level [36 CFR 219.12; 219.27].
Assess insect and disease infestations relative to endemic levels prior to and following management activities [36 CFR 219.12].	Onsite observation and limited sampling. Can include statistically accurate plots [Silicuturalists: B. Short, Foresters, and /or Techniicians; Sale-Admininistrators: R. Dressel, T. Murtaugh; R2 I&D: R. Mask, T. Eager].	Active timber sales and ongoing Landscape analyses and post-sale. Also areas undergoing extensive natural disturbance. Dendrochronology studies.	Insect and disease infestations were observed in and around Grouse Salvage, Twister Blowdown, Fern Creek Salvage, Neff Mountain Salvage, Shaw Lake Salvage, County Line Analysis Area, Lake Fork, Red Mountain/Cornwall, Antelope/Trickle, Rock Creek Analysis Area, and Blowout Mountain. Significant mountain pine beetle was again noted in the ponderosa pine zone on the Saguache Ranger District.	Continue to Assess I & D infestations relative to endemic levels prior to and following management activities [36 CFR 219.12].
Monitor size of harvest openings [36 CFR 219.27]	Traverses, stocking surveys, onsite [Project Silviculturist, Silvicultural Project Prep Foresters/Forestry Technicians].	Pre-sale, current active sales, post-sale areas.	Harvest opening monitoring completed in 2007 through sale prep inspections and sale administration.	Continue to monitor size of harvest openings [36 CFR 219.27].
Assess implementation of silvicultural objectives during pre-sale, harvesting, and post-sale periods.	Onsite, photo points, density measurements [Pre-Sale: Project and Silvilcultur/Prep Forester/Forest Techs and Resource Specialists; Active contracts: Sale Admininistrator; Post-sale: Same as pre-sale].	Pre-sale: Wolf Salvage, Spruce Park Salvage, Rock Creek, Marble Mountain, Blowout Mountain, and Shaw Lake. Post-Sale: Grouse, Neff Mountain, Spruce Hole, Little Kerber, Buffalo Pass, Black Mnt Salvage, and Shaw Lake.	Reviews of Spruce Hole and Twishter showed that the spruce beetle is in check. Reviews on the Finger Mesa, Black Mnt and the Shaw Lake Sale indicated that the sales were being implemented to achieve the silvicultural objectives for these areas.	Continue to Assess implementation of silvicultural objectives during pre-sale, harvesting, and post-sale periods Continued sanitation/salvage efforts will be required on most spruce beetle sales to achieve the silvicultural objectives. Continued reforestation efforts will be required on Drill Pad

Monitoring Item	Method and (Contact)	Planned Locations	Monitoring Accomplished (what, where, results, summary, and references)	Evaluation (what are the recommendations based on monitoring? Are changes needed to the Forest Plan?)
				Salvage to achieve the regeneration objectives.
Assess output performance of timber sale program quantity components as compared /outputs [36 CFR 219.12].	Comparative evaluations (MAR items: 17.1, 17.2, 19.0, 19.1, 20.0, 20.1, 77.1, 77.4, 77.5, 77.8, 77.9, 79.1, 79.2 [Analyst and the Timber Staff].	Various Forest offices.	Planned outputs were not accomplished for reforestion due to a shortage of trees for planting and growth of nursurey crop. The timber offer was 131% of what was planned.	Continue to assess output performance of timber program quantity components as compared /outputs [36 CFR 219.12].
Assess timber program [36 CFR 219.12 (k)].	Comparative evaluations [District TMAs and Forest Timber Program Manager].	Various Forest offices.	The District TMAs and Forest timber program manager reviewed Forest Plan (Forest-wide) desired conditions (goals), objectives, and S&Gs (for Silviculture); reviewed MA, prescriptions, and S&Gs for MAs including suitable timberlands (4.21, 4.3, 5.11, 5.13, and 5.41); and reviewed monitoring approaches to timber-related desired conditions.	Continue to assess timber program [36 CFR 219.12 (k)].