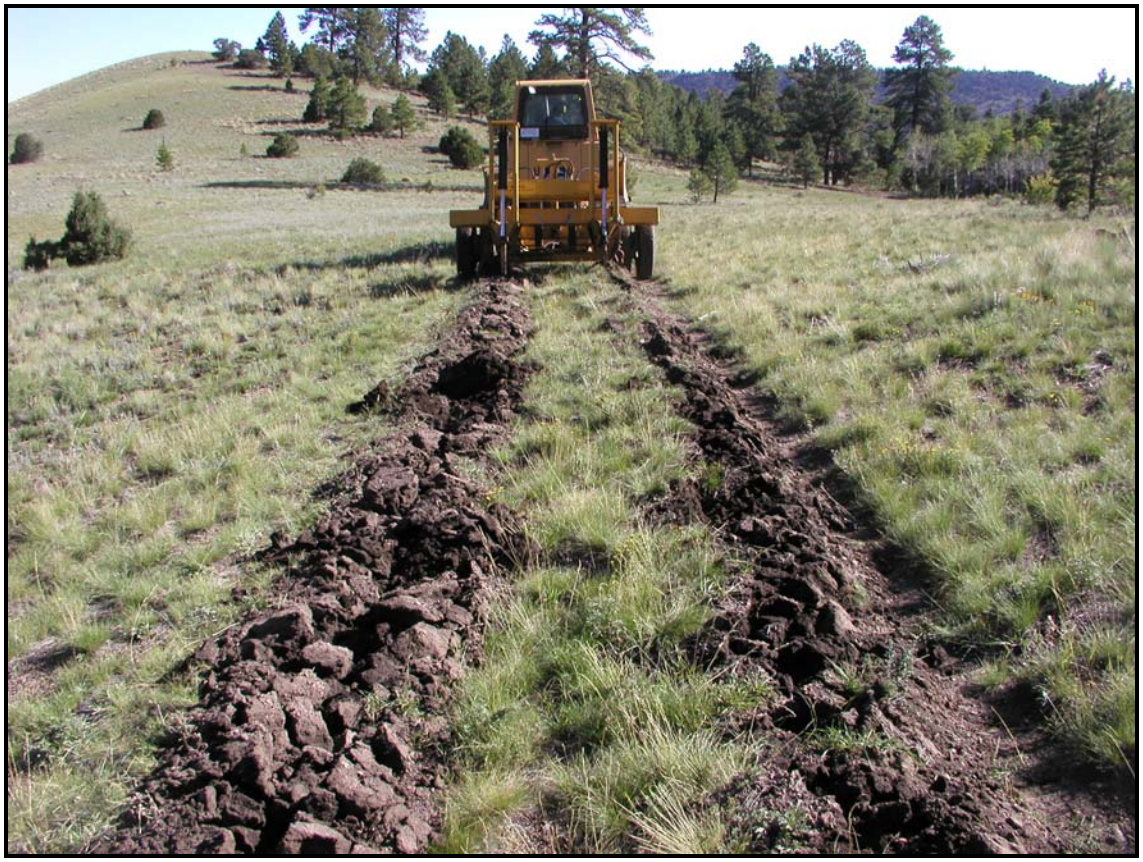
Monitoring and Evaluation Report
Fiscal Year 2006

Rio Grande National Forest, Colorado



United States Forest Service
Rocky Mountain Region
Region Two

2006

Cover photograph by John Rawinski

The Winged Subsoiler attachment on the bulldozer is used to restore soil health where unauthorized two-track roads have been created. The subsoiler and signs have been used to effectively discourage illegal use.

CERTIFICATION

The Rio Grande National Forest's Land and Resource Management Plan (Forest Plan) was approved on November 7, 1996. It is a dynamic, evolving document meant to be 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.

Overall, the 2006 Monitoring and Evaluation results indicate that the management of the Forest is meeting goals, desired conditions, Standards and Guidelines, and prescriptive allocations (per 36 CFR 219.12 (k)). Previous recommendations for amendments are incorporated here by reference. 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 need to be analyzed before correcting the Forest Plan map and the Forest Motor Vehicle Use Maps (MVUM).

- As a result of P.L. 106-530, Great Sand Dunes National Park and Preserve Act, there is a need to correct the Forest Plan map and Forest travel maps to reflect the Park Preserve created from former National Forest lands within the Sangre de Cristo Wilderness. The related Baca Land Exchange has been completed and the Baca Mountain Tract Amendment to the Forest Plan is underway to cover the new land received by the Forest Service.

- The Forest Plan could 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 standards and guidelines 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 vegetation treatments where necessary.

- The Forest needs to assess the recreation Standard specifying camping stay duration limits to make the Standard consistent with other Forests in the Region.

- The Forest needs to ensure consistency of the Forest Plan regarding the afternoon All Terrain Vehicle (ATV) game retrieval direction relative to the 2005 Final Rule for Motorized Recreation in National Forests and Grasslands. The Forest is currently conducting a Travel Management Rule analysis.

I have reviewed the annual Monitoring and Evaluation Report for the Rio Grande National Forest for fiscal year 2006. I believe that the monitoring and 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 Rio Grande National Forest and will implement those that I decide are appropriate, after further analysis and required public notification and involvement.

DAN S. DALLAS
Forest Supervisor

9/28/2007
Date

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INTRODUCTION AND STATUS

The organization of this report is as follows. First, there is a brief discussion of the status of the Land and Resource Management Plan (Forest Plan) appeals, then a discussion covering amendments and potential amendments, followed by monitoring on the Rio Grande National Forest. These include a resource-by-resource discussion of monitoring requirements. Finally, a "State of the Resource FY 2006" section describing the results of monitoring by each resource area. An appendix provides a tabular summary of this past year's monitoring results.

APPEALS

There are no outstanding appeals to the Rio Grande National Forest Revised Land and Resource Management Plan at this time.

FOREST PLAN AMENDMENTS

Several amendments have been completed to date. 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 amendment was a temporary exception applied to Management-area Prescription 3.3. On 3/2/98 a Decision Notice was signed that amended the Forest Plan to allow for timber salvage harvesting on approximately 60 acres within Management-area Prescription 3.3 (Backcountry) in the Twister Blowdown area. The amendment changed the "no harvest" Forest Plan Standard in this prescription, so that salvage of blowdown timber could occur on this site to reduce the risk of bark beetle infestation. This was a non-significant amendment. The timber harvest was completed and the area will again be managed as backcountry. Spruce beetle monitoring activities are continuing in the backcountry area.

Amendment # 2

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

South San Juan and the Weminuche Wilderness Areas; the most visited Wilderness area in the state. A review of Forest Plan direction pertaining to the management of recreation use, changes in recreational use patterns, and preservation of the wilderness character of these areas, was done in order to address these effects. Limits of Acceptable Change (LAC), 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 became available and was used to help formulate a Forest Plan amendment pertaining to Wilderness Management direction.

On 8/3/98 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 standards and guidelines, 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 boundary. The Special Interest Area was originally designed to protect a Sensitive plant (Ripley milkvetch), but the adjustment was made to better 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% 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 Special Interest Area boundary. The analysis to support the amendment, done as a part of the November Analysis Area Environmental Assessment, resulted in reducing the acreage of the botanical Special Interest Area from 2,076 acres to 910 acres. The reduced acreage (1,166 acres) was included in a Bighorn Sheep Management-area Prescription (5.42). The location of the botanical Special Interest Area is to the west of Fox Creek, in the Hicks Canyon area, on the Conejos Peak Ranger District. This is a non-significant amendment.

Amendment # 4

Timber Suitability Amendment. On March 2, 2000, a Decision Notice was signed to amend the Forest Plan in regard to the suitable timber lands on the Rio Grande National Forest. The non-significant Amendment corrects omissions made between the publication of the Draft and Final Environmental Impact Statements 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 US Fish and Wildlife Service 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 10/24/03 which identifies nine Management Indicator Species (MIS), and adds or modifies the associated standards and guidelines and Monitoring and Evaluation Strategy to the Forest Plan.

Status of Previous Recommendations

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 and for updating the Desired Conditions statement for the ski area. A recommendation has been made to incorporate the terminology and definitions in the 1996 Federal Wildland Fire Management Policy Action Plan and the 1998 Wildland and Prescribed Fire Implementation Procedures Guide into the Forest Plan.

Potential Forest Plan Amendments, administrative corrections, or other actions

- Inventoried Roadless Area 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 need to be analyzed before correcting the Inventoried Roadless Area maps, the Forest Plan map, and Forest Motor Vehicle Use maps (MVUM).

- As a result of land purchases and jurisdictional changes resulting from P.L. 106-530, Great Sand Dunes National Park and Preserve Act, there is a need to correct the Forest Plan map to reflect the National Park Preserve within the Sangre de Cristo Wilderness which was formerly National Forest system lands. The newly acquired Baca Mountain Tract requires an amendment to the Forest Plan to bring this area under Forest Plan management. This amendment is currently underway and will be accomplished by working closely with the National Park Service, Saguache County, US Fish and Wildlife Service, and Colorado Department of Wildlife as cooperating agencies.

- The Forest Plan could 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 standards and guidelines 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 at the Wolf Creek Ski Area to make it compatible with the existing visual situation.

- The Forest needs to ensure consistency of the Forest Plan regarding the afternoon All Terrain Vehicle (ATV) game retrieval direction relative to the 2005 Final Rule for Motorized Recreation in National Forests and Grasslands. The Forest is currently conducting a Travel Management Rule analysis.

MONITORING ON THE RIO GRANDE NATIONAL FOREST

On November 11, 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 and Evaluation Report is based on the RGNF Monitoring Plan, as described in Chapter 5 of the Forest Plan for the Rio Grande National Forest. This report is not a list of outputs; rather, it describes conditions of the various resources on the Rio Grande National 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.

Monitoring and Evaluation criteria are based on national policies, Regional monitoring emphasis items, interdisciplinary-team concepts, and legal and other policy requirements. The Monitoring and 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

- Management-area Prescriptions, as well as the Forestwide and Management-area-specific Standards and Guidelines

- The Monitoring Plan

- Congressional recommendations

Annual monitoring goals are described in the Annual Monitoring Operation Plan (AMOP) detailing monitoring expected to be completed in the upcoming year. The AMOP is developed by RGNF resource specialists, who are responsible for monitoring, and is reviewed and approved by the Forest

Supervisor. The AMOP describes in detail reasons, methods, locations, responsible persons, and estimated costs.

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.

Because the Forest Plan has been implemented for only a relatively short time period, the report this year focuses primarily on implementation and effectiveness monitoring. As trends develop and conclusions are validated, the third level of monitoring will be addressed.

MONITORING REQUIREMENTS

This section briefly synopsizes the minimum level of monitoring identified for each resource component of the Monitoring Plan. A more detailed description is included in the Forest Plan (Chapter V, pp. V-4 through V-16). Forest Monitoring efforts are focused on meeting these requirements, however, the amount of monitoring actually done for each element is a function of available funding.

Air Quality

Maintaining air quality at a level that is 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 Monument. Synoptic surveys in all four Wilderness Areas on the RGNF have identified the lakes most sensitive to changes in acidity, and they 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.

Aquatic Resources

Watershed health is a primary focus of the Forest Service. Accordingly, particular emphasis will be placed on this monitoring element. 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 and 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 of six streams identified as damaged in the Monitoring Plan, to evaluate improvement over time, will be reported based on long-term assessments (two streams will be evaluated each year).

Biodiversity

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*; which is 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. Management Indicator Species (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. Management Indicator Species 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 (e.g., 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.

Management Indicator Species 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 so as to support a minimum number of reproductive individuals which are well distributed so individuals can interact in the planning area while addressing 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).

Fire and Fuel Management

"Serious or long-lasting hazard" potential will be reported based on a determination of "relative resource values." Hazard potential from wildfire will be determined through ocular estimates, fuel transects, on-site inspections, and/or surveys. In addition, the Fire program is routinely monitored through the National Fire Management Analysis System. This economic-analysis program addresses the ‘’relative resource value" determination through a relatively complex cost/benefit evaluation of the Forest's fire suppression program.

General Infrastructure

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.

Health and Safety

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

Heritage (Cultural) Resources

Monitoring will be reported 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 those recognized American Indian tribes and Nations having a demonstrated concern for the area of the RGNF, concerning areas of cultural importance will be monitored and reported.

Minerals

Monitoring will be reported 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 somewhere 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. This is well below the potential level analyzed in the Forest Plan. There are lease applications on the Forest that are on hold until the Lynx conservation strategy is completed. Monitoring of locatable minerals will be reported based on the inspection and enforcement of operation plans to assure compliance with the Forest Plan.

Noxious Weeds

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

Range

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 Environmental Assessments (EAs) and Allotment Management Plans (AMPs) for each allotment.

Range utilization will be reported based on the results of routine field analysis.

Recreation

Developed Recreation

Developed recreation site monitoring will be based on facility condition surveys. Visitor use and expectations will be monitored and reported based on customer surveys. Ski area monitoring will be done through approved summer and winter operating plans. Special uses will be monitored through permit compliance and evaluations.

Dispersed Recreation

The Forest will monitor effects of its travel management plan 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.

Unroaded Areas

Monitoring will be reported based on a representative assessment of backcountry areas. 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).

Wild and Scenic Rivers

Monitoring will be reported based on the assessment of resource-management activities that occur within the river corridor.

Wilderness

Monitoring will be reported based on the evaluation of wilderness management thresholds (specific indicators) and appropriate management actions to determine if wilderness standards and guidelines are being met.

Research and Information Needs

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

Research Natural Areas (RNAs)
Monitoring will be reported based on on-site inspections of established Research Natural Areas every five years.

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

Scenic Resources
Monitoring of scenic resources will be reported based on a determination of disturbance, using photographs, on-site inspections, and aerial photographs.

Soil Productivity
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 was maintained or improved. Management actions and effects are evaluated using existing Forest Plan Standards and Guidelines. Soil evaluation techniques were employed on ground-disturbing projects where high soil-erosion, mass-movement hazards or other soils concerns exist.

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

Timber
Restocking of final-harvest areas is required by 36 CFR 219.12(k). Monitoring will consist of surveys conducted in the first, third, and fifth year after final harvest. First-year surveys are on-site inspections, while third- and fifth-year surveys are statistically valid plot-inventory exams.

36 CFR 219.12(k) requires that all Forest lands be examined at least once every ten 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 FY 2006

Summary statements pertaining to the results of monitoring efforts done in Fiscal Year 2006 (FY06), for each specific resource are presented below. The statements are based on the information presented in Appendix A, “Monitoring & Evaluation Table, Rio Grande National Forest, Fiscal Year 2006.”

State of the Resource: Air Quality

Air quality for the Forest is excellent. It 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 fire fighting and reclamation of the Million Burn. Monitoring resumed in 2003, 2004, 2005 and 2006 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.

State of the Resource: Aquatic Resources

From past monitoring, we know 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 for the Rio Grande National Forest improved in 2005 and 2006. 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, 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 has been evaluated through an EIS and mitigation measures have been prescribed in that EIS to comply with the Forest Plan. 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. Mill Creek Reservoir received a great deal of sediment from the burn and the Forest worked with a contractor to clean the reservoir out to its original capacity. The reservoir is full again and the public as full access for recreation.

Several fuel reduction projects occurred in 2006. 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.

State of the Resource: Biodiversity

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, Standards and Guidelines, 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 Standards and Guidelines 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 Management-area 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 again to the *Salix arizonica* site (a Forest Service designated sensitive plant) since there was a report of horses being placed in the protective exclosure. Field inspection revealed that some of the willow plants were trampled, but there did not appear to be significant plant mortality at this time. We will continue to observe this site to ensure that the exclosure integrity remains and/or whether

further management action is needed to protect this population. 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 analysis work.

Several CNHP plant communities of special interest were visited as follows: 1) *Pinus aristata* / *Festuca thurberi* and 2) *Salix geyeriana* /*Calamagrostis canadensis* shrubland. The sites appeared stable and there were no apparent threats.

Old-growth inventories were completed for the following projects: Rock Creek Salvage area, Embargo Hydroax area, Marble Mountain Salvage area, Big Lake Salvage area, and the Willow aspen sale area. 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, and/or net productivity being too high. Because the Mehl criteria are biased toward more productive sites, the Saguache RD appears to generally lack the productive capability to meet the Mehl old-growth descriptions.

The Forest Ecologist visited more than 20% of the Forest's on-going 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 vegetative management 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 scale 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 bark beetle epidemic continues to affect forest habitat conditions, especially in spruce-fir forests. The bark beetle epidemic has had positive effects on habitat for some species (e.g. woodpeckers) and negative effects on others (canopy-dwelling birds). Timber salvage sales were planned and/or implemented across the Forest in response to the bark beetles epidemic. These sales incorporated wildlife conservation measures. Future implementation and effectiveness monitoring will continue to be important to determine the effectiveness conservation measures.

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 (mechanical and prescribed burn) were conducted to restore appropriate fire regimes. Where appropriate, species surveys

were conducted on sites proposed for vegetation management 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.

Drought conditions and drought recovery needs were considered in rangeland management decisions relative to livestock grazing activities and wildlife habitat needs. Reduced stocking rates and/or seasons of grazing were implemented to maintain rangeland health and help provide for maintenance of wildlife habitat requirements in riparian and upland habitats. Although drought conditions have subsided, only about 90% of the allowable numbers of livestock were placed on the Forest due to continue effects due to past and current drought conditions and drought recovery needs. It is anticipated that these reductions assisted in meeting wildlife habitat goals on rangelands. However, rangelands inventories conducted in FY06 indicated that while there are a variety of seral stages found throughout the Forest, there is still a lack of upper seral condition classes that are of value to many wildlife species.

Inventories and/or population monitoring for TES species were primarily associated with project activities affecting habitat. Input of Forest wildlife data into the FAUNA database continued in 2006. 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 2006, the Forest remained a primary cooperator with multiple other entities in the development of a Habitat Conservation Plan for the Southwestern willow flycatcher in the San Luis Valley. The HCP is being written by a private 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. 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 RGNF boundaries. Mexican spotted owls have not been confirmed on the Forest, although there have been recently confirmed occurrence on the adjacent San Juan and Pike/San Isabel National Forests. There are protected activity centers (PACs) with known occupancy.

The current status of the Forest's T&E species is detailed in the annual reports produced for each species. There has been no change in listed T&E species since the updated Forest Plan Biological Assessment (BA) was prepared as part of the Forest Plan MIS Amendment in 2003. However, 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. The Forest Plan Biological Evaluation (BE) is in the process of being updated to address new sensitive species from the 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. 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.

MIS monitoring continued in 2006 on a Forest-wide scale consistent with 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 only began in 2004. A preliminary Forest-level analysis of avian MIS data from the MCB program and the supplemental Forest transects is expected in the fall of 2007. CDOW provided trend data for deer and elk in 2006, reporting that elk population numbers are still above population objectives for the data analysis units (DAUs) across the Forest. Considerations for adjustments in population objectives are scheduled for 2007. CDOW reports deer population numbers fluctuating above or below population objectives across the Forest, except for DAU D-31, where deer numbers are consistently lower than 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. However, it is recommended that the existing process for collecting implementation or effectiveness monitoring data for wildlife Standards and Guidelines be refined in the future in a more holistic manner to better address the goals and desired conditions for the Wildlife resource. A refined process for evaluating the relationship between road densities and deer and elk as Management Indicator Species is also recommended.

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 2006 include: sportfish and native fish inventories; Rio Grande cutthroat trout genetic analysis; fish migration barrier inspections and reconstruction; sportfish/native fish stockings; habitat evaluations; and stream crossing inventories. These activities were completed in partnership with BLM, CDOW and the local Trout Unlimited Chapter.

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, 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 two reservoirs. Results from these inventories confirmed stable, self-sustaining populations of desirable non-native trout species.

Native fish management and restoration is a high priority on the Forest. Management activities completed in 2006 for native fish include population monitoring and evaluation, genetic analysis, whirling disease monitoring, wilderness stockings, stream barrier evaluations, and stream crossing inventories. Density, biomass, and population estimates were conducted on three RGCT streams and one reservoir. Approximately 100,000 fingerling Rio Grande cutthroat trout were stocked into forest

wilderness lakes and streams in 2006. Results from the genetic analysis and whirling disease studies were not finalized in time for inclusion in this report.

Rio Grande cutthroat trout are found in 53 streams and 55 lakes/reservoirs on the Forest, totaling approximately 367 stream miles and 1050 surface acres, respectively. Rio Grande cutthroat trout populations are divided into three categories based upon genetic purity: core populations (>99% pure), conservation populations (>90% pure), and recreation populations (Rio Grande cutthroat trout coexisting with nonnative trout species). Of the 57 streams, 23 of the streams and 2 lakes are considered core or conservation populations and 30 streams and 53 lakes/reservoirs are considered recreation populations. The number of Rio Grande cutthroat trout recreation populations should remain fairly constant on the Forest as these are supported by CDOW hatchery stockings. Of the 3 RGCT populations surveyed in 2006, 2 populations were rated "At Risk and Stable" and the other was rated "Secure and Expanding." Only four RGCT were collected in the reservoir survey which is maintained by CDOW biannual stockings.

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 and 2004; and Lake Fork was stocked in 2005 and 2006.

Only one viable population of Rio Grande chub is known to exist on the Rio Grande National Forest. 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 but only one chub was collected from the lake during 1997 sampling.

Nine stream migration barriers were evaluated in 2006 and only two were found not to be functioning properly. The two streams where the barriers are compromised are on streams classified as "At Risk and Declining."

Stream Crossing Inventories were conducted on 39 RGCT streams (Core Conservation, Conservation, and Recreation Populations) in 2006. The technique utilized was the Region 2 Coarse Screen Assessment for Juvenile and Adult Salmonids (adapted from Region 1 Salmonid Fish Passage Evaluation Criteria). Sixteen of the 39 streams do not have any stream crossings (culverts, bridges, etc). Of the remaining 23 streams, 48 stream crossings were located and evaluated. Approximately 62% of the 48 crossings do not meet trout passage criteria at either the adult or juvenile life stages or both life stages. It is important to note that the crossing 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.

Extremely low stream flows during the period from 2001 through 2003, and competition with introduced 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 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 information available for the fishery resources on the Forest suggests that when properly implemented, the Revised Forest Plan Direction, Desired Conditions, Standards, and Guidelines 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 Standards and Guidelines are warranted.

State of the Resource: Fire and Fuels Management

To address the "state" of the fuels resource, it must be represented as a manifestation of Forest health. In FY 2006, several areas within Fire Regimes 1 (High Frequency/Low Severity) and Fire Regime 3 (Medium Frequency/Mixed Severity) and in Condition Class 2 or 3 were identified, evaluated, and treatment planned. There are still lingering effects from the drought and prescribed fire treatment options must continue to consider effects carefully and apply fire judiciously. The Forest treated approximately 3,860 acres of hazardous fuels. Where fire treatments were implemented (2,021 ac), results were favorable. Mechanical fuels treatment options continue to be utilized to a greater degree (1,840 ac); 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 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*.

State of the Resource: General Infrastructure

Monitoring, based on the results of routine inspections of all facilities, including dams, facilities, drinking water, road bridges, trail bridges, and Forest System Roads indicates the general infrastructure is meeting the needs of Forest users for access and multiple-use management.

State of the Resource: Health and Safety

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

State of the Resource: Heritage Resources

The Rio Grande National Forest made progress in conducting the Heritage Resource monitoring called for in the FY 2006 Annual Monitoring Operation Plan (AMOP). The monitoring of several completed projects of different types where heritage resource sites were identified for protection indicates that protective measures are adequate to ensure the protection of sites. The monitoring of Heritage Resource sites, not associated with a specific project, that have the potential to be vandalized should be continued

to further comply with established Standards and Guidelines. The review of Heritage Resource Inventory Reports for FY 2006 indicates that projects with the potential to impact Heritage Resources are being inventoried and protective measures are adequate.

The Tribal Consultation Bulletin should continue to be 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 Standards and Guidelines.

State of the Resource: Minerals

The minerals monitoring program requires the Forest to validate leasing activities as well as standards and guidelines. One hundred and twelve (112) lease applications were received and were being processed for leasing in 2006. None were sent to BLM. There were no major proposals in the locatable minerals program. Homestake Mining continued reclamation work on their 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 done in compliance with Forest Plan Standards and Guidelines.

State of the Resource: Noxious Weeds

Noxious weeds are a persistent problem on the Forest. Inventories and control were conducted in FY06. Those species, which appear to have increased or have been inventoried more thoroughly are: toadflax, oxeye daisy, short whitetop (aka Hoary Crest), Canada thistle, black henbane, and Russian knapweed. Yellow starthistle has not been found on the Forest but it is located within adjacent counties to the west of the Continental Divide. The Forest treated 484 acres of noxious weeds in the 2006. Again problems with the AIS contracting system delayed implementation of the contract until early July but we were able to meet targets by using a more integrated approach to weed treatment which included mechanical treatment (hand pulling), using domestic sheep, and biological agents to make up of the late start. Sixty-five acres were treated using these other methods. Chemical weed treatments near Platoro continue to be controversial with some local residents and domestic sheep are being used to treat oxeye daisy infestations.

Overall, the Forest Plan Noxious Weed Management Objectives are being met. At this time, there is no need to make changes to the Rio Grande Land and Resource Management Plan's Noxious Weed Management direction but the existing 1996 Weed treatment EA needs to be updated and will be scheduled for FY08.

State of the Resource: Range

Rangelands are being managed for a variety of seral stages with most being managed for upper mid-seral to high-seral condition. Inventory of rangelands conducted in FY06 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 2006 grazing season, only about 90% of the allowable numbers of livestock were placed on the Forest due to continue effects due to past and current drought conditions and drought recovery needs. Most of the livestock moved out of the valley in 2004 or sold have been replaced but not all

permittees have built up their herds to pre-drought numbers for various reasons. The high price of replacement cattle has hampered the ability of many of the permittees to buy back replacement cattle. Allotment analysis data collection and getting the Forest back on track with the Rescissions Schedule has been a major emphasis item for this year. NEPA decisions were signed affecting 23 individual allotments in FY06.

Overall, the Forest Plan Range Objectives are being met but as a result of an FY06 Regional Office Functional Assistance Review several minor changes will be made to improve the efficiencies of the Rio Grande Range Program but will not require any changes in the Forest Plan Range Objectives.

State of the Resource: Recreation

Developed Recreation

Developed Sites:
The Saguache Ranger District completed their developed recreation targets and maintained 7 campgrounds to standard, 2 rental cabins to standard and 12 trailheads to standard. American Land & Leisure, campground concessionaire on the Conejos Peak and Divide Ranger Districts, operated 23 campgrounds, 4 picnic areas, 5 trailheads and 2 boat ramps to standard. In addition to the sites maintained by AL&L, the Divide R.D. reconstructed two trailheads and maintained 17 trailheads to standard. The Divide R.D. also maintained 10 day use recreation sites one additional campground to standard.

Ski Area:
Summer and winter operating plans for Wolf Creek Ski Area were completed and approved in FY 2006. The Master Development Plan (MDP) needs to be updated.

Special Uses:
The Divide R.D. administered 13 outfitter/guide special use permits to standard; the Saguache R.D. administered 6 outfitter/guide permits to standard; and the Conejos Peak R.D. administered 4 outfitter/guide and 5 recreation special use permits to standard.

The Rio Grande National Forest completed inspections of 47 of the 50 Recreation Residences on the Forest. This work was completed in preparation for re-issuance of these term special use permits in 2008.

Dispersed Recreation

Trails
There were plans in FY2006 to complete additional deferred maintenance. The Conejos Peak R.D. completed 18.5 miles of deferred maintenance on trails.

Approximately 269 miles of trails on the Forest received maintenance while more than 300 miles of trail, both motorized and non-motorized met standard.

Approximately 0.75 miles of trail re-route work was completed on the Continental Divide National Scenic Trail (CDNST) from Stoney Pass to Cataract Lake. An additional 1.5 miles of the CDNST was reconstructed.

Travel Management

An Action Plan for implementation of the 2005 Travel Rule is being developed and will be posted on the Rio Grande National Forest web site once approved. The Rio Grande National Forest has been working to update the INFRA database to accurately reflect previous Travel Management decisions in preparation for publication of Motor Vehicle Use Maps in 2008. This work is needed to comply with the 2005 Travel Rule. Updating and verifying the accuracy if the INFRA database for roads and motorized trails will continue through 2007.

Unroaded Areas

The Forest reviewed Inventoried Roadless Areas (IRAs) in FY06 as part of the 2005 State Petition Rule process. This was documented in a status briefing document titled, "Rio Grande National Forest Roadless Area Briefing Paper for the Colorado Roadless Area Review Taskforce." The Forest also provided detailed information to the State of Colorado Roadless Area Task Force and hosted a Colorado Roadless Area Task Force public meeting in Monte Vista in June 2006. The purpose of these meetings was to provide the public an opportunity to comment on the State's development of a roadless area petition.

Wild and Scenic Rivers

No Wild and Scenic corridor monitoring was performed in FY06.

Wilderness

Wilderness monitoring took place in one compartment within the South San Juan Wilderness and within 6 compartments in the Weminuche Wilderness. Results indicate that most resource standards are being met in the South San Juan but there are a few standards being exceeded within various compartments of the Weminuche Wilderness.

Overall, the Forest Plan Recreation and Wilderness Objectives are being met.

The Rio Grande National Forest Fire Plan was revised to better address fire suppression activities and fire use in wilderness areas. This work was completed in order to comply with the Chief's Ten Year Stewardship Challenge.

State of the Resource: Research and Information Needs

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 NRIS, a civil rights project is ongoing to develop methods of identifying under-served communities.

State of the Resource: Research Natural Areas (RNAs)

The North Zapata 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.

State of the Resource: Road Construction, Closures, and Decommissioning

In 2006, Conejos Peak District decommissioned .9 mile, Divide Ranger District decommissioned 5 miles, and Saguache decommissioned 1 mile of unclassified roads. Approximately 109 miles of classified and unclassified roads have been decommissioned since 1996.

State of the Resource: Scenic Resources

Three areas were monitored for Scenic Resources compliance during FY06. In order to obtain Scenic Resources objectives, a project should comply with Scenic Integrity Objectives (SIO's) within two years after project implementation. The three 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 begin staining the concrete color to come into compliance with the Scenic Integrity Objectives and newly build walls and warming huts are not in compliance as of yet, however, the plan is to modify the colors to bring the walls and facilities into compliance by FY07. The Wolf Creek project is still continuing.

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

The Highway 160 Expansion Project is being monitored for Scenic Integrity Objectives. Retaining wall staining marginally meets the SIO's for the corridor above the new tunnel construction. Rock cuts across from the Fun Valley Campground Resort do not meet the Forest Plan Scenic Integrity Objectives as mapped "High", however, the rock cuts can be considered to meet the Scenic Integrity Objective of "Moderate to Low." Changes to the 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 (specifically cut 1-5 near the ice age sign at the Lake Fork Trail Head). In addition blasting techniques are continually being monitored to assess whether they meet Scenic Integrity Objectives due to the use of pre-slit blasting along a visually sensitive portion of Highway 160. In addition, monitoring will continue along the highway on tree removal, storage areas, wall staining, seeding, and replanting to assess whether they meet the Scenic Integrity Objectives for the Highway 160 Corridor. These areas will continue to be monitored through project completion.

Range improvement features, such as corrals along the Los Caminos Scenic Byway, meet a condition of "Moderate" and do not meet "High" as mapped. Efforts are underway to better meet both scenic and economic needs along the Scenic Byway.

Overall, the Scenic Integrity Objectives are being met on the Forest, with the exception of the aforementioned ones. At this time, there is no need to make changes to the Rio Grande Land and Resource Management Plan's Scenic Resource direction.

State of the Resource: Soil Productivity

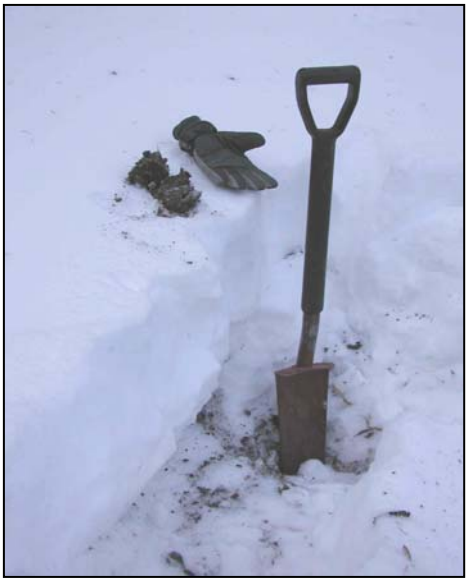
The RGNF soil resource is monitored through project evaluations and soil health assessments. In FY06, two projects were reviewed. Soil health is the current health condition of the soil and its ability to

sustain the potential natural community of vegetation for the long-term. The Forest uses the established Forest Plan standards and guidelines as a basis for evaluation. The three types of soil health ratings are Properly Functioning, At-Risk, and 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 and in its current condition, 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.

Forest Plan Monitoring Site #1 Shaw Lake Timber Sale: On October 4, 2005 (FY06), the Forest soil scientist conducted on-site soils investigations of roads, skid trails and logging operations on the Shaw Timber Sales. Conditions were very wet and no logging was being conducted at that time. The sale administrator had stopped operations until soils became drier or frozen as soils were too wet and beyond operability standards for soil moisture. This action met the Forest Plan standard that addresses this issue defines wet weather as soils that exceed the plastic limit (about 15-20% moisture for most soils) as follows:

> *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.*

On February 14, 2006, the Forest soil scientist examined the soils in the Shaw Lake sale while winter logging was occurring. Winter logging is desirable from a soils perspective, since snowpack or frozen soil can protect soils from erosion, compaction and displacement.



Three soils were sampled. Two were in the wet area delineation and one outside in the uplands. Natural snow depths varied from 14 to 24 inches. This would compact into a layer that meets the requirements for 12 inches of packed snow. In all 3 soils sampled, there are frozen soils at least 2 inches thick and as thick as 8 inches in one sample. Frozen soil conditions would meet Forest Plan direction. The photo shows a sample of frozen soil under 2 feet of snow.

The frozen soil conditions remain until mid-March or so. After that soil conditions may begin to deteriorate due to warming weather and need to be monitored by the sale administrator. The main haul roads are the first to thaw and will indicate when to cease the operating season.

This logging on frozen soils meets the intent of the Forest Plan to conduct winter logging. Lynx tracks were observed during the review of the sale area.

This review found no evidence to indicate a need to change the Forest Plan soil protection standards. The standards are successfully protecting the long-term health of soils if implemented during project activities.

Forest Plan Monitoring Site #2: Closure and Restoration of Illegal Routes: In the fall of 2006 (FY06),

the Forest conducted an on-site investigation to evaluate closure activities for illegal routes. 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 FY07 to determine how well the hunters and other recreationists complied with the closures.

State of the Resource: Special Interest Areas

The botanical area at Elephant Rocks was visually inspected. *Neoparrya lithophila* plants appear to be vigorous and robust. The rocky habitat naturally protects these plants from most human influences. No new concerns were noted.

The Bachelor Loop Special Interest Area (Historical) was visually monitored in FY 2006. There were no noticeable impacts relating to the area noted during the site review.

State of the Resource: Timber

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.

On-site field monitoring, primarily within past timber sale boundaries, during the summer of 2006 relative to monitoring objectives 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.

Planting and first year survival checks were completed on 77 acres on the Drill Pad Fire Salvage, West Fork Fire Salvage, and Million Salvage in 2006. Surveys and certification of successful natural regeneration were completed on 412 acres in the Million Burn area.

Reforestation activities planned for 2007 are additional natural regeneration surveys in the Million burn area, and third-year survival surveys in areas planted in 2005.

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 appropriate consultation with the US Fish and Wildlife Service occurred with the updated Forest Plan Biological Assessment. Timber suitability has been, and will continue to be, evaluated during the project-level planning phase for timber sales. Planning for the Rock Creek, Willow Aspen, McIntyre Salvage and the Embargo Stewardship Project occurred in 2006 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 active in monitoring insect and disease activities across the Rio Grande National Forest with some success in control activities. However, 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 on-going 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. Monitoring of spruce beetle will continue in 2007.

- Spruce beetle monitoring occurred on the Finger Mesa timber sale in 2006. 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 2007.

- The Shaw Lake spruce beetle sanitation/salvage sale was offered 2005. The sale was substantially harvested in 2006. Additional monitoring in the Shaw Lake area is planned for 2007 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 2006 and significant spruce beetle activity continued in the area. The first sanitation/salvage timber sale, Wolf Salvage, was sold in 2006. Additional sales are planned in 2007 and 2008. Continued monitoring is planned.

- Spruce beetle activity was discovered in the 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. Additional monitoring of this area is planned for 2007.

- 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 2007.

- Spruce beetle activity was discovered in areas that were going 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 late 2007 or early 2008. Monitoring of this area is ongoing.

- Spruce beetle activity was discovered at the Wolf Creek Ski Area in 2006 and additional surveys, marking and removal of infested trees occurred during the summer of 2006. Additional monitoring of the area is planned for 2007.

- 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 2006 indicates that mountain pine beetle is continuing to spread within the treatment areas. Additional volume was marked in 2006 to address the additional mortality occurring in the project area.

- The MPB infestation adjacent to the Buffalo Pass Campground continues to spread. The timber sale is under contract and treatment began in 2006. Monitoring accomplished in 2006 resulted in additional trees being marked in addition to the original volume. Carbaryl treatments in the Buffalo Pass campground were discontinued following 2004 field season due to a lack of funding. The trees within the campground are at a high risk of infestation due to the lack of treatment.

- Douglas-fir beetle has continued to be observed and is increasing on the Saguache District in Douglas-fir stands. This is an expected event given the combination of the recent Western Spruce Budworm infestation and drought conditions that have severely stressed trees. Approximately 2,000 trees were protected using MCH caps in the Park Creek area in 2006. Monitoring showed that the treatments were effective in reducing new attacks.

- Monitoring has shown that MPB has moved into numerous ponderosa pine and some lodgepole pine stands across the Forest. Planning began in 2006 on the McIntyre Salvage timber sale and the Embargo Creek Stewardship Project to address MPB. Implementation of these projects is expected in 2007.

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 40-acre limit. Harvest openings occurring as a result of uneven-aged management are generally less than one acre in size. 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 2006 are displayed in the table below:

Item	Measure	Planned	Accomplished	% Accomplishment
Reforestation/Planting	Acres	150	77	51%
Reforestation Surveys	Acres	379	412	110%
Timber Volume Offer	CCF	21,000	23,238	111%

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.

- District-wide assessment of insect and disease infestation should occur to address the current outbreaks.

INTERDISCIPLINARY MONITORING TEAM CONTRIBUTORS

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Gary Frink	Roads
Lynn DiFiore	Facilities
Kelly Ortiz	Landscape Architect
John Rawinski	Soil Scientist
Gary Snell	Range Conservationist
Vince Spero	Archaeologist
John Murphy	Recreation
Randy Ghormley	Wildlife Biologist
Barry Wiley	Fisheries Biologist
Bruce Short	Timber/Silviculture

APPENDICES

Appendix A -- Rio Grande National Forest Monitoring and Evaluation Accomplishments

This appendix synopsizes the monitoring actions and results for fiscal year 2006. 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, summarize, references)	EVALUATION (What are the recommendations based on monitoring? Changes needed to the Plan?)
Air Quality				
Monitor & 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 Monument.	Visibility and particulate monitoring was completed.	No changes in the Forest Plan needed.
	(2) Chemistry of most sensitive lakes. (K. Garcia, J. Fairchild, K. Murphy, L. Dobson)	Three lakes in the Weminuche WA; 2 in the S. 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 needed.
	(3) Health of terrestrial systems such as lichen communities. (L. Stewart)	Three 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 FY99 through FY05.	No changes in the Forest Plan needed.
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 was accomplished (Hat Springs) 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 needed.
Assess air resources relative to (a) Forestwide Goals, Objectives, S&Gs;	From monitoring results, conclude whether Standards and Guidelines and regulations are being followed, and if	As a result of monitoring all the above sites.	Forest management activities are following Standards and Guidelines. Desired Conditions are being achieved.	No changes in the Forest Plan needed.

MONITORING ITEM	METHOD and (CONTACT)	PLANNED LOCATIONS	MONITORING ACCOMPLISHED (what, where, results, summarize, references)	EVALUATION (What are the recommendations based on monitoring? Changes needed to the Plan?)
(b) Management-area Prescription Objectives, DCs, and S&Gs; (c) Management-area Prescription allocations and monitoring methods (36 CFR 219.12 (k))	Desired Conditions are being met. (L. Dobson)			
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 & P.Reinholtz)	Timber Sales: Rock Creek	One larger timber sale that included watershed assessment was the Burrow/Blowout Timber Sale. Small timber sales that relied on a programmatic EA or CE included McIntyre, Big Lake, and Hilman Park. No new watersheds of concern were discovered.	From past work it appears that concern levels for total watershed disturbance have been set conservatively at a safe level to ensure adequate watershed health. No changes are needed.
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 & P.Reinholtz)	As described in the next collumn.	Stream health assessments were completed on numerous streams during timber and range EA or CE analysis: <u>Burrow/Blowout Timber Sale EA:</u> Burrow Creek and tributaries, Jasper Creek and tributaries tributaries to East Fork Pinos, tributaries to Bennett Creek. <u>North Saguache Range EA:</u> Rock, Decker, North Decker, Lone Tree, San Luis, Dorsey, Slaughterhouse, Brewery, and Antora Creeks; Sawmill Gulch <u>Conejos Peak Range EAs:</u> Wolf Creek, Middle Fork Conejos, Adams Fork Conejos, Rio Chama.	Stream health direction in the Plan is appropriate. No changes are needed.

MONITORING ITEM	METHOD and (CONTACT)	PLANNED LOCATIONS	MONITORING ACCOMPLISHED (what, where, results, summarize, references)	EVALUATION (What are the recommendations based on monitoring? Changes needed to the Plan?)
			Divide Range CEs: Perry, Geban, Benino, Groundhog, Bellows, Spring, Viers, Baughman, Soda, Trout, Lagarita, Embargo, Blue, Lagarita, and Little Lagarita Creeks. Localized bank instability was attributed in part to livestock use. Overall stream health was adequate to robust with some minor exceptions. Pass Creek continues to be fully protected from Wolf Creek Ski Area activities and mostly protected from highway 160 reconstruction 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 Rec. Steering committee. Several streams were evaluated prior to fuel reduction projects including tributaries to Pass Creek, Benny Creek, and Bighorn Creek. 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 & P.Reinholtz)	N. Clear Creek Leopard Creek Million Area Stream Channels Pass Creek Tributary	Upper North Clear Creek was evaluated again in 2006 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. Million Timber sale monitoring sites in small ephemeral and intermittent streams established prior to harvest were again evaluated in 2006. These sites evaluate erosion impacts within and below burned areas. We established a permanent cross-section on the Pass Creek tributary draining from the Wolf Creek Village.	No changes in the Forest Plan are needed. Timber sale area revegetation is recovering well. Gully erosion has slowed in affected areas.

MONITORING ITEM	METHOD and (CONTACT)	PLANNED LOCATIONS	MONITORING ACCOMPLISHED (what, where, results, summarize, references)	EVALUATION (What are the recommendations based on monitoring? Changes needed to the Plan?)
			Survey data and photo points were established from which long-term changes can be detected.	
	(3) Level II stream assessment to see if watersheds of concern experience stream/riparian damage. Look for visible evidence of channel damage or water pollution. If visible evidence exists, document with a level II stream health assessment. (Hydrologist: L. Dobson)	Streams within watersheds of concern that are identified during level I Watershed assessments.	No additional watersheds of concern were identified during FY2006.	No changes in the Forest Plan needed.
Assess Aquatic Resources relative to 36 CFR 219.12 (k)	Visually determine if Standards and Guidelines 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 direction.	Implementation monitoring occcured during timber sale and range allotment administration. Preliminary road work for the County Line timber project was evaluated. Standards and guidelines effective.	Aquatic S&Gs: No changes in the Forest Plan needed.
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 in her study areas. 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 recommended in the Forest Plan. 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, chub, and sucker (Native Fish Population Monitoring). Utilize electrofishing and gill nets. (Forest Fish Biologist: B. Wiley, FS seasonal employees; CDOW)	Numerous streams and lakes across the Forest are monitored for population status, genetic purity, and whirling disease..	RGCT populations monitored in 2006 include: SF Carnero Cr., Prong Cr., Rhodes Gulch, and Little Ruby Lake. All population data was collected following CDOW protocols and entered into CDOW database. CDOW 2006 Fisheries Inventories Rio Grande Basin includes detailed analysis for these populations (unpublished).	No changes in the Forest Plan needed.

MONITORING ITEM	METHOD and (CONTACT)	PLANNED LOCATIONS	MONITORING ACCOMPLISHED (what, where, results, summarize, references)	EVALUATION (What are the recommendations based on monitoring? Changes needed to the Plan?)
			Rio Grande sucker inventories were conducted on Big Springs Cr. and NF/MF Carnero Cr. No suckers were found in NF/MF Carnero Creeks and only adult suckers in Big Springs Cr. Lake Fork Conejos River was stocked with Rio Grande Suckers in 2005 & 2006.	
	(c) Boreal Toad – Monitoring and Survey (CDOW, FS)	Two existing sites were monitored (Jumper Creek and Trout Creek)	Adults were confirmed at both monitoring sites, and both sites were productive (tadpoles, metamorphs and yearlings were documented). West Trout Crk again supported the highest number of individuals, with at least 25 adults, 4 sub-adults, 1000-3000 tadpoles, and 200-500 metamorphs. Jumper Crk. Supported 0 adults, <100 tads, and 50-100 metamorphs.	No changes in the Forest Plan needed.
	(d) Peregrine falcon - Ocular surveys of nests. (CDOW, FS)	Eight known nest sites on Forest and 2 on other public lands within Forest administrative boundaries.	Of 8 known exisitng sites, 2 were monitored by FS. No CDOW monitoring reported. Both these were active,and had confirmed breeding.	No changes in the Forest Plan needed .
	(e) Southwest Willow Flycatcher (FS, FWS, CDOW)	Mapped habitats on RGNF. Project-specific sites for range allotments were surveyed on a project-specific basis.	Surveys were conducted on all 3 districts, based on maps and project-specific range allotments. No birds were found. Ground-truthing of habitat maps continued as a basis for future survey work.	No changes in the Forest Plan needed
	(f) Black swift - surveys of nests. (RMBO)	RGNF sites included in the state-wide Monitoring Colorado Birds (MCB) survey.	Surveys were conducted by RMBO and no change in status was reported for the RGNF. State-wide survey work is beginning to provide baseline data on population size and geographic (state-wide) distribution that will be needed to establish a (state-wide) population management plan.	No changes in the Forest Plan needed.
	(g) Bats – Surveys (CDOW)	CDOW bat surveys of known locations on the Forest.	Local bat surveys documented the long-legged bat (M. volans) and little brown bat (M. lucifigus) on Forest. No change in status of known Townsend's bat colony was reported by CDOW.	No changes in the Forest Plan needed.
	(h) MIS Birds (FS and RMBO)	Existing MCB and supplemental transects	MCB publishes an annual statewide report. Data were collected by Forest personnel on Forest supplemental	No changes in the Forest Plan needed

MONITORING ITEM	METHOD and (CONTACT)	PLANNED LOCATIONS	MONITORING ACCOMPLISHED (what, where, results, summarize, references)	EVALUATION (What are the recommendations based on monitoring? Changes needed to the Plan?)
		on the RGNF were included in the state-wide MCB survey. Project-specific inventories were conducted.	transects and presence of MIS avian species were confirmed. MIS were also confirmed on supplemental transects. Project-specific inventory results are incorporated into project analyses and data are recorded in unpublished, internal databases. Presence of MIS avian species were confirmed on proposed project sites.	
	(i) MIS bird habitat (FS)	Available habitat on the Forest is estimated based on species habitat requirements and Landtype Associations (LTAs). Habitat availability is ground-truthed at the project level.	Habitats are to be mapped as part of establishing an estimated baseline for avian MIS. Site-specific habitat availability and occupancy has been documented through project inventories.	No changes in the Forest Plan needed
	(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 do not meet herd objectives in each of the 4 DAUs, so CDOW is 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 in each of the 4 DAUs, so CDOW is managing elk to decrease numbers.	No changes in the Forest Plan needed
	(k) Deer and elk habitat (FS)	Habitat effectiveness is evaluated on a site-specific basis by project.	Mule deer and elk habitat effectiveness, based on road densities, generally are considered in the mid-range Forest-wide, but may be variable on a site-specific basis by project. Recommend evaluation of a revised process to evaluate deer and elk habitat based on road densities, and this relationship to LRMP monitoring goals and objectives.	No changes in the Forest Plan recommended.
Monitor the change in selected species habitat (Coarse	(a) Other EIS special-status plants. Photo interpretaion site visits, GIS, satellite imagery.	Special-status plants are at various sites over the Forest.	A site visit was made to the *Salix arizonica* site (a Forest Service designated sensitive plant) since there was a report of horses being placed in the protective exclosure.	No changes in the Forest Plan recommended.

MONITORING ITEM	METHOD and (CONTACT)	PLANNED LOCATIONS	MONITORING ACCOMPLISHED (what, where, results, summarize, references)	EVALUATION (What are the recommendations based on monitoring? Changes needed to the Plan?)
Filter). 36 CFR 219.27.	(Ecologist: D. Erhard)		Field inspection revealed that some of the willow plants were trampled, but there did not appear to be significant plant mortality at this time. No new special status plants were found this year.	
	(b) Snag-dependent species. (FS)	Species inventories by project. Habitat is Forest-wide.	Observations of snag-dependent species were conducted in conjunction with proposed projects. Local data was also collected during MCB program and supplemental MIS transects. Unusually high numbers of species such as American three-toed woodpeckers were noted in association with bark beetles in spruce-fir forest types. Habitat monitoring is scheduled every 5 years and will be reported in the 5-year evaluation report.	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. TEP surveys are ongoing (Canada lynx and bald eagle – 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. Habitat monitoring is scheduled every 10 years and will be reported in the appropriate evaluation report.	No changes in the Forest Plan recommended.
Monitor changes in composition, structure, and pattern for each Landtype Association. 36 CFR 219.27.	Photo interpretation, GIS, satellite imagery, and/or spatial analysis. (Ecologist/Wildlife Biologist)	All Landtype Associations over the entire Forest.	The intent of this monitoring component was to see if the impact of management activities, over the life of the Forest Plan, was causing an inordinate change to the LTAs at a coarse-scale. In other words, was something grossly unexpected occurring than what was predicted under the Forest Plan relative to the LTAs. Forested LTAs -- actual timber harvest has been much less than was predicted under the 1996 revised Forest Plan. So, overall forested LTAs are generally growing older and being influenced predominately by natural processes (i.e., cycles of drought, insects, disease, and other	No changes in the Forest Plan recommended.

MONITORING ITEM	METHOD and (CONTACT)	PLANNED LOCATIONS	MONITORING ACCOMPLISHED (what, where, results, summarize, references)	EVALUATION (What are the recommendations based on monitoring? Changes needed to the Plan?)
			disturbances). Of note, is the spruce beetle outbreak that has been impacting the Engelmann spruce LTAs (LTA 1 and LTA 13) in recent years. It is unknown what the duration or magnitude of this outbreak may be and ultimately what changes in landscape configuration may result. Non-forested LTAs -- the non-forested LTAs are primarily influenced by livestock grazing and recreation activities. There have been no significant changes in the magnitude/extent of these activities from those predicted in the revised Forest Plan (or as indicated in the recreation section of this report).	
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 E. 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 Veg. 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 CNHP plant communities of special interest were visited as follows: 1) *Pinus aristata* / *Festuca thurberi* and 2) *Salix geyeriana* / *Calamagrostis canadensis* shrubland. The sites appeared stable and there were no apparent threats.	Monitor changes in CNHP Significant Plant Communities listed in EIS. 36 CFR219.27.
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)	Forestwide	Old-growth inventories were completed for the following projects: Rock Creek Salvage area, Embargo Hydroax area, Marble Mountain Salvage area, Big Lake Salvage area, and the Willow aspen sale area. 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, and/or net productivity being too high. Because the Mehl criteria are biased toward more productive sites, the Saguache RD appears to generally lack the productive capability to meet the Mehl old-growth descriptions.	No changes in the Forest Plan recommended. The Forest continued its progress toward inventorying old growth this year.
Evaluate Biodiversity and Wildlife relative to 36 CFR 219.12 (k).	Ocular, plots, transects. (Ecologist; Wildlife Biologist)	Forestwide.	The Ecologist and District Biologists visited more than 20% of the Forest's on-going 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.

MONITORING ITEM	METHOD and (CONTACT)	PLANNED LOCATIONS	MONITORING ACCOMPLISHED (what, where, results, summarize, references)	EVALUATION (What are the recommendations based on monitoring? Changes needed to the Plan?)
Fire and Fuels Management				
Assess Fire/Fuels relative to: 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. On-site inspections. (AFFMO, Ecologist, & Silviculturist)	Ponderosa pine and mixed-conifer cover types (fire regimes 1 & 3, condition class 2 & 3) – Forestwide. 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 R, and South Fork areas. Drought conditions continue to affect some RX fire treatment options in FY06.	No changes needed in the Forest Plan
General Infrastructure				
Assess facilities for compliance with state & federal requirements & FS Handbook/Manual direction.	(1) Inspect dams, facilities, drinking water, road & trail bridges, and FDRs for safety and maintenance. (Forest Engineer)	50% of Forest road bridges, each high-hazard dams every 3 years, each medium-low hazard 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.	50% of bridges inspected in FY06. No high hazard dams are located on the Forest – all medium and low hazard dam were inspected in FY03, 2 were inspected in FY04, 2 were inspected in 2006. All trail bridges were inspected in FY05. 80% of facilities were inspected in 5 year FY01-FY06 period. No water & wastewater inspections were done 2006. All Level 3, 4, and 5 roads were inspected in 5 year FY01-FY06 period. Infrastructure safety and maintenance monitoring goals were mostly met for FY06.	No changes needed in Forest Plan monitoring requirements. Inspections and testing will continue as outlined.
	(2) On-site inspections to monitor compliance with Travel Management Plan. (Law Enforcement Officers, District Level II Officers, and	Various locations around the Forest as patrolled by Forest Law Enforcement Officers and other	Inspections were conducted through hunter patrols and day-to-day contacts by law enforcement officers and other FS personnel. Numerous issues were raised and some citations issued. Forest continues to seek compliance with the current travel management plan as	No Forest Plan changes needed.

MONITORING ITEM	METHOD and (CONTACT)	PLANNED LOCATIONS	MONITORING ACCOMPLISHED (what, where, results, summarize, references)	EVALUATION (What are the recommendations based on monitoring? Changes needed to the Plan?)
	other personnel as assigned)	Forest Personnel.	the MVUM is being developed.	
	(3) Assess planned road closures through on-site inspections. (Engineering & Timber)	Various locations across the forest.	On site inspections made by Forest Personell of proposed illegal route closures. In the fall of 2006 (FY06), the Fores conducted an on-site 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 FY07 to determine how well the hunters and other recreationists complied wit the closures.	No Forest Plan changes needed.
M & E Infrastructure relative to: 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 FY06. No high hazard dams are located on the Forest – all medium and low hazard dam were inspected in FY03, 2 were inspected in FY04, 2 were inspected in 2006. All trail bridges were inspected in FY05. 80% of facilities were inspected in 5 year FY01-FY06 period. No water & wastewater inspections were done 2006. All Level 3, 4, and 5 roads were inspected in 5 year FY01-FY06 period. Infrastructure safety and maintenance monitoring goals were mostly met for FY06.	No changes in the Forest Plan recommended.
Health and Safety				
Monitor and evaluate 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 & include project work zone safety requirements discussion. Road crew supervisor ensures compliance. Monthly safety meetings are held to discuss accidents & near misses. Facilities safety inspections were completed in FY06.	No changes in the Forest Plan needed.

MONITORING ITEM	METHOD and (CONTACT)	PLANNED LOCATIONS	MONITORING ACCOMPLISHED (what, where, results, summarize, references)	EVALUATION (What are the recommendations based on monitoring? Changes needed to the Plan?)
Heritage Resources				
Monitor and evaluate projects to assure Heritage Resources have been appropriately protected.	On-site-inspection of selected highly significant heritage resources. On-site inspection of: National Register-eligible heritage resources identified for protection during ground-disturbing project-related activities. (Heritage Specialist: V. Spero)	Identified highly significant heritage resources including open lithic sites, rock art, and prehistoric stone structures. Historic buildings are also included. Heritage resources located on selected range allotments, timber sales and/or prescribed fire projects.	Higly Significant Prehistoric Heritage Resource sites monitored in FY2006: 5RN330 Dog Mtn. Petroglyphs, 5HN55 Black Mtn. Folsom Site. 5RN323 Sentinel Mtn. Stone Structures. Historic Heritage Resources Monitored: Alder Guard Station, 5RN417 Elwood Guard Station, and Kortright Cabin. Project-related heritage sites recorded: Schrader Hydroaxe Project: 5RN831, 5RN832, 5RN833, and 5RN834; Cathedral Prescribed Burn: 5RN272 and 5RN273; Rito Hondo Prescribed Burn: 5CN105; Schilling Spring Fuels Treatment: 5CN941, 5CN942, and 5CN943; Brown Salvage Timber Sale: 5SH2313, 5SH2314, and 5SH2315; Duck Pond Small Timber Sale: 5SH2378 and 5SH2379. Results: All prehistoric and historic heriatge reources monitiored were reported to be in good condition. No major impacts are occurring..	No changes needed in the Forest Plan.
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 FY2006 Tribal Consultation was initiated by individual project "scoping" letters and by the RGNF Quarterly Scoping Document (SOPA).	No changes to the Forest Plan are needed. 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 relative to 36 CFR 219.12 (k).	Review of all Heritage Resource Reports done in FY 2006. (Heritage Specialist: V. Spero)	Review of all Heritage Resource Reports done in FY 2006	Reports for proposed projects sent to the Colorado State Historic Preservation Officer for concurrence were reviewed.	No changes needed in the Forest Plan. Proposed projects comply with 36 CFR 219.2 (k).
Minerals				
M & E oil & gas activities so effects	Compare annual & cumulate OG activity. (Minerals	Forest summary.	There was no oil and gas development on the Forest in 2006. The Forest Plan reasonable and forseeable	No changes needed.

MONITORING ITEM	METHOD and (CONTACT)	PLANNED LOCATIONS	MONITORING ACCOMPLISHED (what, where, results, summarize, references)	EVALUATION (What are the recommendations based on monitoring? Changes needed to the Plan?)
do not exceed predicted by 10%	specialist)		development scenario and its efects are still valid as described in 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 2006. The Forest Plan reasonable and forseeable development scenario and its efects are still valid as described in the Forest Plan.	No changes or additional analysis needed.
M & E Minerals program relative to 36 CFR 219.12 (k).	On-site inspections of mineral activities; review reports. (Minerals specialist)	Forest Summary.	Oil and gas lease stipulation map for Alternative G has been updated to better reflect the intent of the Forest Plan. 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 or additional analysis needed.
Noxious Weeds				
M & E Noxious Weeds relative to: 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. (Forest and Ranger District Weed Coordinators)	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 planned for the Baca Tract in the Sangre De Cristo's, to locate and control infestation of Yellow toad flax and canada thistle. Treatment continues on all three districts at known infestion sites.	Forestwide inventories were conducted on all three Ranger Districts in 2006. Specific information on species found and areas infested and treated/inventoried can be found in Ranger District records. 450 Acres were treated by chemical and biological control means on the Forest .	No changes needed in the Forest Plan

MONITORING ITEM	METHOD and (CONTACT)	PLANNED LOCATIONS	MONITORING ACCOMPLISHED (what, where, results, summarize, references)	EVALUATION (What are the recommendations based on monitoring? Changes needed to the Plan?)
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	See above	No changes needed in the Forest Plan
Range				
M & E Range program relative to 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 needed in the Forest Plan.
	(2) Monitor Desired Condition transects for trend. (Primary: G. Snell; Secondary: T. Post, Kelly Garcia, M. Swinney)	See above	See above	No changes needed in the Forest Plan.
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 were undertaken for NEPA as per R2 RAMTAG. .	Rangeland suitability assessments were initiated in 2005 and continued into 2006.	No changes needed in the Forest Plan.
	(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 needed in the Forest Plan.
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.	Each district will conduct analysis based on Forest Priority rescission Act Allotments.	Monitoring for vegetation utilization was conducted on all three Ranger Districts. About 200,000 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	No changes needed in the Forest Plan.

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	Swinney)		Planned Locations in previous column.	
Recreation – ***Developed Recreation***				
Assess developed sites for a) visitor expectations, trends, and customer satisfaction; and b) quality and safe facilities.	(1) Customer Survey. Forestwide Market and Customer Survey. (Forest and District Recreational Personnel)	Forestwide.	A forestwide customer survey completed in fiscal year 2005. Information from the FY2005 customer survey on the Rio Grande NF is on the website at http://www.fs.fed.us/recreation/recuse/recuse.shtml.	No Forest Plan changes needed.
	(2) Annual Developed-Site Hazard Tree Inspections. Inspection of Forest's campgrounds and picnic areas for removal of hazard trees. (I&D Specialist & District Rec/Timber personnel)	Campgrounds & Picnic Areas	Annual hazard tree inspections of campgrounds & picnic areas were completed as part of the sites' preseason maintenance inspections. Hazard trees were marked and removed in FY2006. 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 Forest Plan changes needed.
	(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 2006 winter & summer operating plans were developed and approved and monitoring inspections made. Inspection reports are on file at the Divide RD 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; hardening of the stream crossing and re-seeding on the benches near the two new lower parking areas. Removal of downfall trees along lift lines with a helicopter; continued installation of new ski trail signs	Continue to work with the ski area in conjunction with planned projects. No other changes in the Forest Plan are needed.
	(4) Monitor RGNF 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	Districts issued new special use permits in conjunction with the prospectus process. 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 FY2006.	A screening checklist is also required when deteminining 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 needed.
Assess developed	Use figures collected by	All concession & FS	Campground use and occupancy rates were recorded in	No Forest Plan changes needed are

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sites actual use compared with projected outputs (36 CFR 219.12 (k)	concession campground mgrs and FS campground hosts in our fee campgrounds	campgrounds and picnic sites	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 and 2 rental Granger Thye cabins were maintenance and fee collection is completed force account.	needed.
Evaluate developed recreation relative to 36 CFR 219.12 (k).	Comparative evaluation for M&E Report. (Forest and District Recreation Personnel)	Forestwide Developed-Recreation Prescription Areas.	Forest Recreation objectives, Forest-wide standards, Recreation Management Area standards, Desired Conditions, standards and guidelines and monitoring were assessed in conjunction with proposed project assessments.	No Forest Plan changes are needed. We will plan to monitor this element in FY07
Recreation – *Dispersed Recreation*				
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 FY07, approximately 90% of all Forest trails were inventoried for and entered into INFRA.	No Forest Plan changes are needed.
	(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 Forest Plan changes are needed.
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 more use and impacts off designated roads and trails. Volunteers monitored the winter use in the Lobo area and indications were that most users observed the posted dispersed use areas and regulations. This is an ongoing project.	No Forest Plan changes needed. Forest is looking at management actions to address the increased off road and trail use.
Evaluate Dispersed Recreation relative to 36 CFR 219.12 (k).	Comparative evaluation for M&E Report. (Forest and District Recreation Personnel)	Forestwide Dispersed Rx Areas.	Forest dispersed-recreation objectives, forest-wide standards, management area standards 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 FY09
Recreation – *Unroaded Areas*				
Assess the physical,	Assess the impacts on the	Forestwide	Districts continue to install travel management related	No changes in the Forest Plan

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biological, and social resources within Backcountry Areas.	physical, biological, and social resources (indicators). (Forest Rec Specialist and RSST)	Backcountry Areas.	signage. A follow-up look at the signing and use on these trails was made in mid-June. The signs were still intact and helped with regulating the type of use permitted on these trails.	recommended.
Evaluate Backcountry Areas relative to 36 CFR 219.12 (k).	Comparative evaluation for the M&E Report. (Forest and District Rec Personnel)	Forestwide Backcountry Areas.	Forest Backcountry Area objectives, forest-wide standards, management area standards and guidelines, desired conditions and monitoring were assessed by District staff. Mapping errors in the backcountry boundaries have been noted either during the initial work with project environmental assessments (Fox Mtn (020948) or during routine field inspections. These corrections need to be addressed under an administrative correction to the Forest Plan and to Forest Travel maps. The 2001 Roadless Area Final Rule has been 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 is undergoing a Colorado State Roadless Review Process in 2006. Approximately 93,000 acres orignally affected by the November 2000 Roadless Area Conservation Final EIS were allocated to Management-area Prescriptions that allowed road construction and reconstruction. These areas are currently under review in the Colorado State Roadless Review Process.	Corrections to the Forest Plan map for roadless area boundaries is needed to correct the boundaries from those described in the Roadless Area Conservation EIS.
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 write-up 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 monitoried in FY06.	The Forest Plan will need an amendment to address the Forest boundary and mangement 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 FY07. No other Forest Plan changes are

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				needed.
Evaluate Wild and Secnic River Management –area Prescription Objectives, Desired Conditions, and S&Gs. 36 CFR 219.12 (k)	Comparative evaluation for the M & E Report. (Forest and District Recreation personnel)	Forestwide Wild and Scenic River Management-area.	The W/S river standards, desired conditions, allocation and monitoring were reviewed.	No changes in the Forest Plan recommended.
Recreation – *Wilderness*				
Monitor and evaluate visitor-use levels and other Wilderness resources. 36 CFR 293.2	Schedule for implementation those Priority 1 items outlined in each wilderness Area WIS. Surveys, data gathering, and reports. (District Wilderness Coordinators, Wilderness Rangers, and Resource Specialists)	South San Juan and Weminuche 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 Sangres are 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 FY07. The wilderness team is assessing those compartments where some standards are being exceeded and developing recommended management actions. No changes are needed to the monitoring indicators outlined in the wilderness EA.
Evaluate Wilderness Forestwide Goals, Objectives, S&Gs and Wilderness Management-area Objectives, Desired Conditions, and S&Gs. 36 CFR 219.12 (k).	Comparative evaluation for the M&E Report. (Forest Recreation Specialist and District Widlerness Coordinators)	Forestwide Wilderness Management-areas.	The Wilderness team has prioritized and monitored wilderness compartments to evaluate whether standards are being met or exceeded.	Continue to monitor wilderness compartments in FY07.
Research and Information Needs				
Determine progress	Questionnaire. (Forest Staff)	Poll Forest Resource	Progress is continuing on: 1) watershed-based inventories	No changes in the Forest Plan

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of accomplishing needed research. (Items listed on the top of page V-16 of the Forest Plan).		Specialists on progress.	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 appropriate corporate data bases. Under NRIS, a civil rights project is ongoing to develop methods of identifying under-served communities.	recommended.
Research Natural Areas (RNAs)				
Evaluate RNAs relative to 36 CFR 219.12 (k).	Ocular, plots, transects, GIS. (Ecologist: D. Erhard)	Designated Research Natural Areas.	The North Zapata 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.	On-site 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 2006 are the same sites monitored in 2003 (relative to meeting Scenic Integrity Objectives). Wolf Creek Ski Area: site visits showed that the new exterior entrance walls were not in compliance with the Scenic Integrity Objectives 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 Scenic Integrity Objectives, 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 Scenic Integrity Objective at the Wolf Creek Ski Area to make it compatible with the existing visual situation.	No changes needed in the Forest Plan.

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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 2006, since the surveys are awaiting Washington Office approval.	No changes needed in the Forest Plan.
Evaluate scenic resources relative to 36 CFR 219.12 (k).	Summarize report	Forest	Three separate areas were monitored for Scenic Resource compliance during FY 2006. Under the terms of Scenic Resources, all areas have two years to come into compliance with the Scenic Integrity Objectives for any area after project implementation. These projects will continue to be monitored over the next year.	No changes needed in the Forest Plan.
Soil Productivity				
Assure that land productivity is maintained or improved.	(1) Monitor soil quality standards. (Soil Scientist: J. Rawinski)	Million Salvage winter logging	This area is in properly functioning condition.	No changes in Forest Plan needed. Standards and assessments are adequately working.
	(2) Use erosion model to predict erosion or analyze projects after completion. (Soil Scientist: J. Rawinski)	None		No change needed.
	(3) Ocular estimates, pace transects, on-site, professional judgements to monitor fertility, erosion, mass movement. (Soil Scientist: J. Rawinski)	Park Precribed Fire		No change needed.
	(4) Mass-movement evaluation by monitoring existing and potential problem areas. (Soil Scientist: J. Rawinski)	Projects where mass-movement potential is moderate or high and other landslide-prone areas, W. Lost Trail Creek, Chama Basin, others.	Inspected the Chama Landslides. Leche Creek slide from 1986 is healing. A new natual-caused landslide occurred just north of dispersed camping area… a debris avalanche amnd it appears to be a natural event.	No changes needed.
M & E reclamation and reveg. efforts. (Soil Scientist: J. Rawinski.)	On-site and/or randomtransects, review District project records and erosion models. (Soil	California Gulch	Monitored the application of watershed restoration techniques and progress.	No changes needed. The Forest Plan gives appropriate direction to reclaim damaged soils.

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	Scientist: J. Rawinski)			
M & E Soil Productivity relative to 36 CFR 219.12 (k).	Project results, field reviews, data analysis, and modeling results. (Soil Scientist: J. Rawinski)	See above.	See all projects above.	No changes needed.
Special Interest Areas				
Assess protective measures and interpretive efforts.	Ocular surveys. (Ecologist: D. Erhard; Heritage Resource Specialist: V. Spero)	SIAs	The botanical area at Elephant Rocks was visually inspected. *Neoparrya lithophila* plants appear to be vigorous and robust. The rocky habitat naturally protects these plants from most human influences.	No changes in the Forest Plan recommended.
Evaluate Special Interest Areas relative to: 36 CFR 219.12 (k).	Summarize reports or information from Districts. (Ecologist: D. Erhard; Heritage Resource Specialist: V. Spero)	SIAs	The botanical area at Elephant Rocks 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 Bachelor Loop Special Interest Area (Historical) was monitored in FY 2006. There were no impacts relating to the area noted during the visit.	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 2006, a total of 412 acres were surveyed for or certified as being fully stocked. 77 acres were planted in West Fork, Drill Pad and Million Salvage. 4000 tree shelters were installed at West Fork. .	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 Forestwide level. (Analyst/Silviculturist)	Assessing timber suitability.	Forest-wide suitability assessments were not planned or completed in 2006. Suitability assessments were completed at the landscape or project levels for the Rock Creek, Willow Aspen, McIntyre Salvage and the Embargo Stewardship projects	Continue to assess timber suitability at the project level. 36 CFR 219.12; 219.27
	(2) On-site 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, Grouse, Buffalo Pass,	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	Continue to assess timber suitability at the project level. 36 CFR 219.12; 219.27

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		Rock Creek	timber base upon completion of the Forest Plan amendment.	
Assess insect and disease infestations relative to endemic levels prior to and following management activities. 36 CFR 219.12	On-site observation and limited sampling. Can include statistically accurate plots. (Silicuturalists.: {B. Short}; Foresters and /or Techniicians Sale-Admin {R. Dressel, T. Murtaugh}. R2 I&D {R. Mask, T. Eager})	Active timber sales and ongoing Landscape Analyses & post-sale. Also areas undergoing extensive natural disturbance. Dendrochronology Studies	Insect and disease infestations were observed in and around Grouse Salvage, Twister Blowdown, Spruce Hole Salvage, La Manga Salvage, Fern Creek Salvage, Neff Mountain Salvage, Shaw Lake Salvage, County Line Analysis Area, Lake Fork, Red Mountain/Cornwall, Antelope/Trickle, Buffalo Pass Salvage, 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, on-site. (Proj. Silvi. Proj. Prep Foresters/Forestry Technicians)	Pre-sale, current active sales, post-sale areas.	Harvest opening monitoring completed in 2006 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	On-site, photo points, density measurements. (Pre-Sale: Project and Silvi/Prep Forester/Forest Techs and resource specialists. Active contracts: Sale Admin. Post-sale: Same as pre-sale)	Pre-sale: Wolf Salvage, Rock Creek, Marble Mountain, Blowout Mountain, Shaw Lake. Post-Sale: Grouse, Neff Mountain, Spruce Hole, Little Kerber, Buffalo Pass, Shaw Lake.	Reviews of Spruce Hole and Neff Mountain showed that the spruce beetle is in check. Reviews on the Buffalo Pass Sale 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 West Fork Salvage to achieve the regeneration objectives.
Assess output performance of TS 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. The timber offer was 111% of what was planned..	Continue to assess output performance of timber program quantity components as compared /outputs. 36 CFR 219.12
Assess Timber program relative to 36 CFR 219.12 (k).	Comparative evaluations. (District TMA's and Forest timber program manager)	Various Forest offices.	The Ditrict TMA's and Forest timber program manager reviewed FP (Forestwide) Desired Conditions (Goals), Objectives, and Standards and Guidelines (for	Continue to assess timber program relative to 36 CFR 219.12 (k).

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			Silviculture); reviewed Management-area, Prescriptions, and Standards/Guidelines for Management-areas including Suitable timberlands (4.21, 4.3, 5.11, 5.13, and 5.41); and reviewed monitoring approaches to timber-related Desired Conditions.	