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Forest Plan Monitoring and Evaluation Report

Fiscal Year 2009

**Rio Grande National Forest,
Colorado**

Cover photograph of Deadman Creek drainage area in the Sangre de Cristo Mountains.

CERTIFICATION

The Rio Grande National Forest's (RGNF or Forest) Land and Resource Management Plan (Forest Plan), approved on November 7, 1996, is a dynamic, evolving document subject to change. Monitoring of the Forest Plan is essential in evaluating its effectiveness and making necessary adaptive management changes. The Forest Plan has been amended six times to date, and an additional amendment is expected to be completed in the fall of 2009 (Fiscal Year [FY] 2010). Overall, the 2009 monitoring and evaluation results indicate that the management of the Forest is meeting goals, desired conditions, standards and guidelines (S&Gs), and prescriptive allocations (per 36 CFR 219.12 (k)). My recommendations for future Forest Plan assessments or amendments 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 Colorado Roadless Rule DEIS. These are included in the ongoing Colorado Roadless Rule EIS analysis which is expected to be completed in 2011. The outcome of that analysis may require minor corrections to the roadless area maps.
- As a result of Public Law 106-530, Great Sand Dunes National Park and Preserve Act of 2000, there is a need to correct the Forest Plan map to reflect the Park Preserve created from former National Forest lands within the Sangre de Cristo Wilderness and the newly acquired Baca Mountain Tract. The related Baca Land Exchange has been completed and the proposed Baca Mountain Tract Amendment #6 to the Forest Plan is currently undergoing an environmental assessment (EA) to include the newly acquired land into the Forest Plan. This amendment is being done through a joint EA with the Great Sand Dunes National Park and Preserve and is expected to be completed in the fall of 2009 (FY 2010).
- The Forest should conduct a status assessment for the following items: (1) review the Forest Avian Monitoring Protocol (2005) to determine if an update is needed to incorporate and supplement the new Monitoring Colorado Birds sampling design; (2) improve habitat monitoring and reporting for avian MIS, especially riparian-willow species that may be influenced by range program activities; and (3) review mule deer population status with the local CDOW to determine why some populations remain below objective and what role habitat may play, if any, in this consistent pattern.
- The Forest continues to suffer from the effects of epidemic-level insect infestations which have reached catastrophic levels. The Forest continues to assess forest health conditions and may propose Forest Plan amendments to allow for necessary vegetation treatments.
- The Forest needs to re-assess the recreation standard specifying camping stay duration limits for standard consistency with other Forests in the Region.

I have reviewed the annual monitoring and evaluation report for the RGNF for FY 2009. 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 RGNF and, after further analysis and required public notification and involvement, will implement those that I decide are appropriate.

Dan S. Dallas
Forest Supervisor

09/28/2010
Date

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1. Introduction and Status

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

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

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

2. Appeals

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

3. Forest Plan Amendments

Six Forest Plan amendments have occurred to date, and one proposed amendment is underway (expected completion is November 2009 [FY 2010]). There are also several amendments, corrections, or other actions that have been recommended. These are outlined below.

Completed Amendments

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

Amendment # 1

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

Amendment # 2

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

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

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

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

Amendment # 3

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

Amendment # 4

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

Amendment # 5

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

Amendment # 7

Southern Rockies Lynx Management Direction Amendment. A non-significant amendment to all the Forest Plans in Colorado was signed on October 28, 2008, by Rick Cables, Regional Forester. This amendment added lynx conservation measures through the application of revised S&Gs to the Forest Plan.

Ongoing Proposed Amendments

Proposed Amendment # 6

Baca Mountain Tract. This proposed amendment would address the ownership and jurisdictional changes due to Public Law 106-530, Great Sand Dunes National Park and Preserve Act of 2000. Portions of the Sangre de Cristo Wilderness within the RGNF became the Great Sand Dunes Preserve. The RGNF also obtained a portion of the Baca Grande Land Grant called the Baca Mountain Tract. There is a need to correct the Forest Plan map to reflect the new RGNF boundaries and to incorporate the Baca Mountain Tract into the Forest Plan. The proposed Baca Mountain Tract Amendment #6 to the Forest Plan is being analyzed in the Baca Mountain Tract/Camino Chamisa Environmental Assessment (EA), a joint EA with the Great Sand Dunes National Park and Preserve. The Great Sand Dunes National Park and Preserve, Saguache County, USFWS, and Colorado Division of Wildlife (CDOW) are cooperating agencies in this EA. This amendment is expected in the fall of 2009 (FY 2010).

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

- There were several recommendations for changing the wording of some of the silvicultural guidelines and for changing monitoring requirements for fish and birds in the Forest Plan. These were addressed in the MIS amendment discussed above.
- There have been recommendations for correcting mapping errors in the inventoried roadless area (IRA) boundaries. IRA mapping errors were identified in the Forest Roads Analysis Report (2004) and documented in the RGNF Colorado Roadless Review Taskforce Briefing Paper and presentation dated June 7, 2006, and the Colorado Roadless Rule DEIS. These are currently being analyzed in the ongoing Colorado Roadless Rule EIS, which may result in a correction to the roadless area maps.
- The Forest continues to suffer from catastrophic, epidemic-level insect infestations. The Forest continues to assess forest health and may propose plan amendments to allow for vegetation treatments where necessary.
- The Forest needs to assess the Forest Plan recreation standard which dictates recreational stay duration limits to make the standard consistent with other Forests in the Region.
- The Village at Wolf Creek access analysis identified the need to change the scenic integrity objective (SIO) at the Wolf Creek Ski Area to make it compatible with the existing visual situation which has been highly modified due to the ski area development, Highway 160 and its improvements, and the Colorado Department of Transportation (CDOT) maintenance facilities. There also was a recommendation to update the desired condition statement for the ski area. These items will be addressed when the next NEPA analysis for ski area development is completed.
- The Forest recently conducted an analysis to assess Forest Plan consistency with the 2005 Travel Management Rule. The analysis concluded that the Forest Plan, including the afternoon ATV big game retrieval direction, is in compliance with the 2005 Travel Management Rule and no changes to the Forest Plan are needed.

- A recommendation has been made to incorporate current terminology and definitions for wildland fire and prescribed fire management policy and implementation into the Forest Plan. This may be addressed as an administrative correction to the Forest Plan in the future.

4. Monitoring Requirements and State of the Resource

Introduction

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,
- MA prescriptions, as well as the Forest-wide and MA-specific S&Gs,
- the monitoring plan and,
- congressional recommendations.

Annual monitoring goals can be described in the annual monitoring operation plan (AMOP) detailing monitoring expected to be completed in the upcoming year. Chapter V of the Forest Plan outlines the monitoring task, precision, frequency, reporting method, and the responsible party.

Three types of monitoring are described for Forest management:

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

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

FY 2009 Monitoring and Evaluation by Resource

This section (1) briefly synopsizes the minimum level of monitoring identified for each resource component of the monitoring plan (under "Monitoring Requirements" subheading); and (2) summarizes FY 2009 monitoring results for each resource component (under "State of the Resource" subheading). More detail on monitoring requirements is included in the Forest Plan (chapter V, pages V-4 through V-16).

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

Air Quality

Monitoring Requirements

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

State of the Resource

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

Samples were collected from eight sensitive high-elevation lakes at established long-term sampling sites. Lake visibility and particulate data are useful in modeling to predict impacts from proposed facilities that could impact air quality. These data are also used to prescribe pollution control technology for new major polluting facilities. No additional information is available from lichen monitoring.

Aquatic Resources

Monitoring Requirements

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

Monitoring 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 EA project involving land disturbance. Monitoring of streams identified as “at risk” within watersheds will occur, and be reported in, watershed assessment sections of appropriate EAs. Monitoring to evaluate improvement over time of six streams identified as damaged in the monitoring plan, will be reported based on long-term assessments (two streams will be evaluated each year).

State of the Resource

Watershed disturbance is highest in areas of past timber harvest activities. 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, such as 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.

The spruce beetle epidemic is spreading and is reducing live basal area to a large degree in some watersheds. The loss of these trees will likely result in minor to moderate increases in total runoff and peak flows, depending on annual precipitation and increases in understory vegetation.

Stream health on range allotments is robust for the most part, but some reaches are at-risk due to bank impacts caused by livestock congregating along the riparian zones. This is especially noted where drainages are narrow and confined or water sources are marginal. Range specialists continue to make adjustments in grazing systems to address impacts and avoid excessive concentration of animals in sensitive riparian areas. Stream health is determined by comparing channel conditions to a similar "reference stream" that represents expected conditions. This comparison is either made visually or by using in-depth measurements.

The Wolf Creek Ski Area continues to exceed Forest Plan sediment control requirements. Activities that occurred to improve sediment and drainage control included hardening service roads with crushed rock, and cleaning culverts to allow unrestricted stream flow. In addition, seeding and mulching of ski runs was completed in several areas to increase vegetation and prevent erosion.

Several fuel reduction projects occurred in 2009. Stability and general condition of streams within these project areas were evaluated prior to the projects. Where necessary, channels and sensitive soil areas were identified for buffering from the burns. The Forest also assessed stream condition for timber sale projects and range allotment renewals. Minor concerns were noted in some cases and changes in management are expected to produce improvement in those areas. We also returned 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 and Kerber Creek Watersheds. Two streambank stabilization projects were completed in the Alamosa Watershed at the Alamosa Campground and approximately 0.5-mile upstream; and one project was completed at the Conejos Campground.

Biodiversity

Monitoring Requirements

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

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

Monitoring will occur at two different scales. The "fine-filter" scale will focus on particular plant and wildlife species that generally occupy distinct habitats which cannot be accurately monitored at the landscape

level. MIS were specifically selected as one tool to help evaluate diversity and species viability Forest-wide. The rest of the fine-filter work is specific to the known location(s) of the particular plant or animal. The intent of the fine-filter work is to track the species' population trends over time. The “coarse-filter” work focuses on tracking the changes in gross habitat conditions (such as cover type and structural changes).

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

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

State of the Resource

Ecology Program. The ecology program was responsible for the plant-related items in the Biodiversity section of the Monitoring Plan; they were: (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). The ecology program was also responsible for making a determination of whether the biodiversity-related goals, desired conditions, S&Gs, and prescription allocations (per 36 CFR 219.12 (k)) were being met or were still appropriate.

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

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

A site visit was made to known *Astragalus ripleyi* sites (a Forest Service designated sensitive plant) and they appeared stable and secure. New occurrences of *Astragalus ripleyi* were found this year.

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

Several Colorado Natural Heritage Program (CNHP) plant communities of special interest were visited as follows: (1) *Carex aquatilis* herbaceous vegetation; (2) *Salix monticola* mesic forb shrubland; and (3) *Salix planifolia* mesic forb shrubland. The sites appeared stable and there were no apparent threats.

Old-growth inventories were completed for the following projects: Burrow Blowout Timber Sale, Baca Mountain Tract Amendment, Rio de los Pinos Timber Sale, San Isabel Creek Fuels Reduction, and Del Norte Peak Commercial Firewood. To date, old growth (Mehl 1992) on the RGNF remains uncommon. On the Divide and Conejos Peak Ranger Districts, old growth appears to be limited due to a lack of patchiness, lack of structural diversity, and/or net productivity being too high. Because the Mehl criteria are biased toward more productive sites, the Saguache Ranger District appears to generally lack the productive capability to meet the Mehl old-growth descriptions.

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

Wildlife Program. The Wildlife Program was responsible for the terrestrial wildlife-related items in the Biodiversity section of the Monitoring Plan. This included a determination of whether the biodiversity-related goals, desired conditions, S&Gs, and prescription allocations (36 CFR 219.12 (k)) are being met or are still appropriate.

The Forest contains a variety of habitats that support approximately 196 species of birds, 69 species of mammals, and 15 species of amphibians/reptiles. Sustainability of this diverse resource is primarily related to the maintenance of a desired vegetative condition, or combination of conditions, that achieve the habitat requirements for specific species or groups of species (Regional Objective 2 of the Forest Plan). For some species, however, viability is tied to features such as rock cliffs (e.g., peregrine falcon), waterfalls (e.g., black swift), caves or mines (e.g., Townsend's big-eared bat), or specific structural attributes such as snags (e.g., 63 species in Colorado) or downed wood (e.g., Canada lynx denning habitat). Evaluation of habitat conditions across the Forest is primarily associated with timber sales, range allotment revised management plans, and other project activities that provide an opportunity for both coarse- and fine-scale assessments. Proposed management activities are evaluated for effects on wildlife and their habitats with larger activities often accompanied by site-specific surveys for some species. For groups such as threatened, endangered, and sensitive species (TES), specific survey and management direction are applied. Based on the survey and habitat evaluations, conservation measures intended to provide for species viability and habitat sustainability are incorporated, as appropriate.

The RGNF is primarily comprised of high-elevation spruce/fir forest and aspen (53 and 20 percent of the plant community types, respectively) and thus has a high conservation responsibility for species associated with these forest types. In 2009 there was no change in the amount of spruce/fir forest or aspen available to dependent wildlife species and little change in the structural composition of this forest type from management activities on the RGNF. Natural disturbance events associated with bark beetles continued to be the primary influence on habitat conditions in spruce/fir, especially in older stands. Based on 2009 aerial flight data, well over 150,000 acres of spruce forest exhibit high levels of spruce beetle activity. Bark beetle influences are known to have positive effects on habitat for some species (e.g., woodpeckers) and negative effects on others (e.g., canopy-dwelling birds). Timber salvage sales continue to be planned and/or implemented across the Forest in response to the bark beetle mortality. The overall acreage trend of salvage sales in the planning stages in response to the increased bark beetle activity is expected to increase in the future, suggesting that implementation and effectiveness monitoring of design criteria for the wildlife resource as associated with salvage sales may be increasing in importance. A need to develop a correlation between summer and winter dense hare cover in local spruce/fir types has been identified in relationship to analysis and implementation of the Southern Rockies Lynx Amendment. It is recommended that this be a multi-funded effort that will increase our ability to sample snowshoe hare habitat quality during the summer and correlate that to winter snowshoe hare habitat values. All available information suggests that FY 2009 salvage sales successfully incorporated conservation measures during the planning phases. Implementation monitoring occurred during

one timber sale program review on the Saguache Ranger District (Long Lost Cabin Timber Sale) but was not reported for any other sales on any districts. No specific recommendations for improvements regarding the wildlife resource were indicated in the Saguache Ranger District review.

Range implementation occurred during grazing permit administration and program review; however, monitoring information is not readily available to determine if conditions for wildlife species (e.g., MIS) are being met in important habitats such as riparian habitats. Two of three districts report that riparian habitat monitoring information is not available from either the range or wildlife programs. In 2009, one district reported undesirable conditions in a post-burn project due to livestock grazing and suggested that treatment areas should be allowed up to two growing seasons prior to allowing livestock to graze post-burn areas. One additional district reported that current utilization standards for riparian zones do not appear to be providing for suitable habitat conditions for most riparian-dependent wildlife, including MIS birds. As reported in 2008, the lack of riparian monitoring information suggests that additional efforts to assess riparian habitat conditions for wildlife in relationship to the range program are needed. The wildlife program will put additional monitoring emphasis toward this concern in the future.

In 2009, the wildlife program conducted habitat improvement projects on 5,039 acres of National Forest Systems land. These projects included vegetative treatments (i.e., mechanical and prescribed burns) in lower elevation vegetation types and willow (for moose browse), birdbox and guzzler installations, and road closures. Habitat improvement projects were once again targeted at big game species and cavity-nesting birds. Post-treatment monitoring was conducted on at least 215 acres of big game winter range and moose browse, with new photos taken at established photo-points on one ranger district.

Inventories and/or population monitoring for TES species were primarily related to project activities such as timber sales. In 2009, the Forest entered 119 new observation, site, and/or survey data information into the new Natural Resource Inventory System (NRIS) wildlife database. Still, improvement needs to occur in regards to utilizing the new database. Lynx habitat baseline data were updated based on proposed projects and management activities, and reported to the USFWS in an annual report. In addition, the Forest completed and reported information for a new monitoring requirement associated with the use of exemptions and exceptions for the Southern Rockies Lynx Amendment (SRLA). Approximately 76 acres of potential southwestern willow flycatcher habitat was surveyed to protocol in 2009, primarily in association with range activities, to determine presence and distribution of suitable habitat on the Forest and whether suitable sites are occupied. Results continued to be reported annually to the USFWS through our year-end report to the Regional Office. In 2009, no individual southwestern willow flycatchers were detected on Forest land. In 2009, little additional work or involvement occurred with other entities in the development of a habitat conservation plan (HCP) for the southwestern willow flycatcher in the San Luis Valley. In 2009, the Forest continued to contribute funds to and cooperate with adjacent Forests and the USFWS in conducting population and habitat monitoring for Uncompaghre fritillary butterfly. To date, the number of occupied colonies on the Forest remains at six and habitat surveys remain ongoing. The one colony area reported to have experienced impacts from livestock trampling in 2007 displayed no evidence of livestock impacts in 2009. There were no Mexican spotted owl surveys conducted on Forest land in 2009, although surveys did continue on adjacent BLM lands. To date, the presence of this species remains unconfirmed on the Forest or in the San Luis Valley area.

In FY 2009, the Forest completed 65 biological evaluations/assessments for TES species. There were two requests for concurrence from the USFWS for project determinations and no formal consultations. The current status of the Forest's T&E species is detailed in the annual reports produced for each species and in the Wildlife, Fish, and Rare Plant (WFRP) database. No change in status occurred with our T&E species; however, one additional species (New Mexico meadow jumping mouse) was added to the Forest list of

candidate species. In concurrence with the USFWS, this status was limited to the Conejos Peak Ranger District pending the outcome of small mammal surveys planned for summer 2010.

Surveys and/or monitoring for sensitive raptor species occurred on two ranger districts in 2009, with efforts focused on one ranger district. That district surveyed four of five known goshawk territories and locating one new alternate nest. Three of five nests were productive. No other districts reported survey efforts for the northern goshawk. However, the Forest also participated in the Regional Goshawk Survey protocol, and located a territorial adult near Fox Mountain on the Divide Ranger District. Subsequent searches for the nest later in the year were unsuccessful. The Forest also received monitoring reports from the CDOW on Canada lynx, boreal toads, and game species such as elk, mule deer, pronghorn, and bighorn sheep. Information was not reported for species such as bats in 2009 due to the reorganization of the Bats/Inactive Mines (BIMP) Project associated with the CDOW.

MIS monitoring was again conducted in 2009 on a Forest-wide scale with surveys conducted at the project-level for some activities. In 2009, the Rocky Mountain Bird Observatory (RMBO) continued State-wide avian monitoring using the grid-based monitoring design under the Monitoring Colorado Birds (MCB) program. In 2009, 10 grid-based sites were again monitored under the MCB program. The Forest did not monitor any of the 15 supplemental MIS transects that were established in 2004 under the original MCB program. Based on the MCB report for the 2009 survey effort, 59 species were detected on the Forest. Species detected include two Region 2 sensitive species, two USFWS birds of conservation concern, and four of our six management indicator species (MIS). Sampling efforts through 2008–09 appear adequate to detect desired population trends on two of the six MIS species, with two species not being detected. No additional reports regarding status of avian MIS were received in 2009.

Monitoring data for mammalian MIS (mule deer and elk) populations for 2009 was again furnished by the CDOW. Based on information from 2009, most deer populations remain at or below objective while elk populations remain above objective. This consistent pattern is of concern to the Forest and was discussed in a meeting with local CDOW biologists. One mule deer Data Analysis Unit (D-37) on the east side of the Forest remains consistently far below objective. The DOW is proposing changes to deer and elk populations in several DAUs based on this information. Because of key changes in some MIS programs (e.g., MCB program), lack of habitat information for some species, and consistent population patterns of others (e.g., mule deer and elk), an interdisciplinary Forest-wide MIS status assessment is again recommended to determine what, if any, changes are needed to improve the MIS program. The status assessment recommended for MIS should also include the following items: (1) review the Forest Avian Monitoring Protocol (2005) to determine if an update is needed to incorporate and supplement the new MCB sampling design; (2) improve habitat monitoring and reporting for avian MIS, especially riparian-willow species that may be influenced by range program activities; and (3) review mule deer population status with the local CDOW to determine why some populations remain below objective and what role habitat may play, if any, in this consistent pattern.

As in 2008, two ranger districts are successful at providing Forest Plan monitoring information for wildlife while one ranger district is only partially successful. The Forest wildlife biologist will work with the ranger districts to emphasize the importance of monitoring and assist them in improving the quality of responses to the Forest Plan wildlife monitoring items. It appears that post-project implementation monitoring could be improved. Again, the Forest wildlife biologist will work with the ranger districts to emphasize the importance of implementation monitoring. Continued efforts to assess and improve Forest Plan implementation and effectiveness monitoring are recommended, particularly in regards to range resource influences on MIS habitat goals.

Overall, the Forest appears to be meeting the goals and desired conditions for the wildlife resource as intended in the amended Forest Plan. Conservation measures and Forest Plan S&Gs appear to be incorporated into project planning as appropriate.

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 above 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 2009 include: sportfish and native fish inventories; sportfish/native fish stockings; habitat evaluations; and stream culvert replacements. These activities were completed in partnership with BLM and CDOW.

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

Native fish management and restoration is a high priority on the Forest. Management activities completed in 2008 for native fish include population monitoring and evaluation, wilderness stockings, stream crossing inventories, and finalizing a conservation agreement for RGCT. Density, biomass, and population estimates were conducted on five RGCT streams and two reservoirs. Approximately 100,000 fingerling RGCT were stocked into Forest lakes and streams in 2009.

RGCT are currently found in 57 streams and 62 lakes/reservoirs on the Forest, totaling approximately 350 stream miles and 1,900 surface acres, respectively. RGCT populations are divided into three categories based upon genetic purity: core populations (>99 percent pure), conservation populations (>90 percent pure), and recreation populations (RGCT coexisting with nonnative trout species). Of the 57 streams, 30 of the streams and 3 lakes are considered core or conservation populations and 27 streams and 59 lakes/reservoirs are considered recreation populations. The number of RGCT recreation populations should remain fairly constant on the Forest because they are stocked by CDOW. The numbers for core populations differ slightly from 2008 due to updated genetic results and new stocking locations.

Eight streams on the forest support small introduced Rio Grande sucker populations. North Fork Carnero Creek and Middle Fork Carnero Creek were sampled for suckers in 2009 and no suckers were documented in either stream.

Only one viable population of Rio Grande chub is known to exist on the RGNF. There is one small self-sustaining population of Rio Grande chub in the Alamosa River drainage from Silver Lakes to Terrace Reservoir.

In 2008, six culverts that were fish migration barriers were funded for replacement through the Forest Service's Legacy Roads Initiative and Western Native Trout Initiative. Crossing design and specifications were developed in 2008 and the crossings were replaced in 2009.

Extremely low stream flows during the period from 2001 through 2003, and competition with nonnative species, appear to have had some impact on native fish distribution and abundance on the Forest. Impacts range from less than desirable population parameters, to increased populations of nonnative species, to entire loss of populations. Habitat concerns appear to be site specific and not an overall threat to trout populations

across the Forest. The Forest-wide abundance and distribution of RGCT appear to be stable, although the USFWS listed them in 2008 as a candidate species with a listing priority number 9. This determination was based primarily upon impacts from nonnative trout and relatively short occupied stream lengths (and not from impacts from Forest-related activities or projects). Self-sustaining nonnative trout populations are widespread throughout the perennial streams across the Forest.

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

Fire and Fuels Management

Monitoring Requirements

"Serious or long-lasting hazard" potential is reported based on a determination of "relative resource values." Hazard potential from wildfire will be determined through ocular estimates, fuel transects, onsite inspections, and/or surveys. Areas determined to have high hazard potential from wildfire and high relative resource value will be the focus areas for the fuels management program.

State of the Resource

The fuels resource can best be represented as a component of Forest health. In FY 2009, areas within fire regime 1 (high frequency/low severity) and fire regime 3 (medium frequency/mixed severity) and in condition class 2 or 3 were identified, evaluated, and planned for treatment. The Forest fuels program treated approximately 3,230 acres of hazardous fuels. Where fire treatments were implemented (approximately 1,990 acres), results were favorable. Mechanical fuels treatment options continue to be used (approximately 1,240 acres); both to address the lack of appropriate burn windows, alleviate concerns for burn projects near developments, and maintain the focus on key point #3 of the National Fire Plan: Hazardous fuels reduction for "communities at risk." Planning and implementation in these areas has addressed the silvicultural and fuel hazard mitigation objectives. Approximately 1,200 additional acres received secondary fuels treatment, primarily through the timber sale program.

On-going fuels/forest health surveys and evaluations continue to provide land managers with valuable insight into the state of the resource as it relates to the potential for wildland fires to create unacceptable resource impacts. Though some areas have been identified as such, the Forest Plan provides adequate direction and needs no significant changes in fire and fuels management.

The February 13, 2009, document "Guidance for Implementation of Federal Wildland Fire Management Policy" and the April 9, 2009, WO memo "Updated Guidance for Implementation of Federal Wildland Fire Management Policy" have been incorporated into the Forest's program. There are still some terminology changes that may need to be addressed regarding terms used in the Forest Plan.

General Infrastructure

Monitoring Requirements

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

State of the Resource

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

Health and Safety

Monitoring Requirements

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

State of the Resource

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

Heritage (Cultural) Resources

Monitoring Requirements

Monitoring is based on the condition evaluation for heritage resources discovered during project proposal evaluations or during or after the implementation of the project. In addition, monitoring of selected significant heritage resources, also known as priority heritage assets (PHAs), not associated with specific project proposals will be implemented and reported. Consultation efforts with recognized American Indian Tribes and Nations demonstrating concern for areas of cultural importance will also be monitored and reported.

State of the Resource

The monitoring of several completed projects where heritage resource sites were identified for protection indicates that protective measures were adequate, except in two cases. During a monitoring trip in July 2009 for the Grayback/Pintada Range Analysis (Divide Ranger District), it was discovered that the Off Cow Camp cabin and barn (5RN315) and the Fitton Guard Station barn (5RN314) were being adversely impacted by cattle grazing. Cows had entered the structures, undermining floors and walls. In using the exteriors eaves for shade, the cattle had also impacted vegetation resulting in erosion around the foundations. The Off Cow Camp and the Fitton Guard Station Complex are both eligible to the National Register of Historic Places (NRHP). To address the impacts, American Recovery and Restoration Act (ARRA) funding was secured to restore the structures and construct fencing to prevent cattle from encroaching. This work will be achieved in 2010 through a partnership with *Historicorps;* a public/private organization committed to historic preservation.

During a monitoring trip in August 2009 for the South Saguache Range Analysis (Saguache Ranger District), eligible prehistoric site 5SH1446 was monitored. The site visit revealed that livestock are loafing on the site and causing substantial soil erosion. To mitigate for adverse effects, trees will be felled on the site in 2010 to discourage use by livestock.

In April 2009, a condition assessment was completed for the Creede Clay Mine (5ML329) that is eligible to the NRHP and consisdered a Forest priority heritage asset. During the assessment, it came to the Forest's attention that the the private land owner that owns the short strip of land between Highway 149 (Silver Thread) and the Clay Mine on Forest land will not grant access to the site to facilitate historc restoration or rehabilitation. In 2010, the district ranger and the heritage program manager will make contact with the land owner in order to negotiate a possible solution in 2010.

The monitoring of heritage resources not associated with a specific project and that have the potential to be vandalized should be continued to be monitored in compliance with established S&Gs. A review of project-level heritage resource inventory reports for FY 2009 indicates that projects with the potential to impact heritage resources are being inventoried and protective measures are adequate.

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

Minerals

Monitoring Requirements

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

State of the Resource

The minerals monitoring program requires the Forest to validate leasing activities as well as S&Gs. There was no oil and gas leasing or development on the Forest in 2009. Two plans of operations for exploration of locatable minerals, in Mineral County, were approved in 2008, and were ongoing into the fall of 2009. Water sampling and monitoring was conducted periodically at the Big 6 Mine, and along Miner's Creek. The continued monitoring of the reclamation associated with the two approved plans of operations will be ongoing for multiple years following the cessation of operations.

The Forest continued to monitor water quality in Windy Gulch below the Bulldog Mine in Mineral County. In addition, the reclamation, re-vegetation, and monitoring of abandoned mine sites in the Bonanza Mining District took place throughout the summer and fall of 2009. In the mineral materials program, the Forest Service administers a number of in-service, free-use, and commercial common variety mineral operations. All are in compliance with Forest Plan S&Gs.

Noxious Weeds

Monitoring Requirements

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

State of the Resource

Noxious weeds are a persistent concern on the Forest. Inventories and control were conducted in FY 2008. Those species that have increased or have been inventoried more thoroughly are: toadflax, oxeye daisy, short whitetop (also known as hoary crest), Canada thistle, black henbane, Russian knapweed, and downy brome (also known as cheatgrass). The Forest treated 870 acres of noxious weeds in 2009. Acres treated were funded by NFVW (800 acres) and CWKV (70 acres). Chemical weed treatment near Platoro continues to be controversial with some local residents: for the past several years we have utilized domestic sheep to treat this location, but due to recent observations and documentation of the presence of bighorn sheep we can no longer

utilize domestic sheep for treatment. During the summer annual "Pulling for Colorado", a Statewide volunteer recruitment effort to give the public an opportunity to help treating noxious weeds, 110 volunteers participated on 5 weed projects on the Forest including in the area around Platoro. It is likely that the Forest will revert back to the use of approved chemicals in the Platoro area for the treatment of oxeye daisy because of the scope of the infestation and proximity to the South San Juan Wilderness.

Overall, the Forest Plan noxious weed management objectives are being met. At this time, there is no need to make changes to the Forest Plan noxious weed management direction, but the existing 1996 weed treatment EA needs to be updated. Due to budgetary concerns, the planned update of the Rio Grande weed EA will not be completed until after the 2010 treatment season. To better coordinate the treatment efforts and to improve the efficiency of the FS and BLM to meet targets, a jointly funded Valley-wide Weed Coordinator has been hired for 5 months of the year. This is part of the Valley's Service First Agreement. An accurate treatment map was obtained for the second time this year as a result of requiring the use of a Geo Explorer GPS [global positioning system] unit and a data dictionary prepared by the Forest Service and made part of the weed treatment/inventory bid package and contract.

Inventory for new infestations continued with four previously undetected infestations being found on the Forest and adjacent BLM lands. An increase in the total acres of downy brome was detected, but treatment efforts in the fall of 2008 proved to be very effective in killing a large infestation on Cochotopa Pass.

Range

Monitoring Requirements

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

State of the Resource

Rangelands are being managed for a variety of seral stages, with most being managed for upper mid-seral to high-seral status. Continued inventory of rangelands conducted in FY 2009 indicated that while there are a variety of seral stages found throughout the Forest, there is an imbalance of seral-stage classes with 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 2009 grazing season, about 98 percent of the allowable numbers of livestock were placed on the Forest to further help with range recovery from long-term drought and extended delays in the summer rainy season. For the past several years the normal rainy season arrived 2 to 3 weeks later, and was more scattered than was experienced prior to the 2002 drought. Allotment analysis data collection and getting the Forest back on track with the Rescissions Act schedule has been a major emphasis for this year. NEPA decisions were signed affecting 6 individual allotments in FY 2009. This effort has resulted in the completion of 66 allotment decisions in the past 4 years compared to 17 in the previous 10 years (1996–2006). Analysis has been collected on 20 additional allotments that will have decisions signed in FY 2010.

Overall, the Forest Plan range objectives are being met, but as a result of a FY 2007 Regional Office Functional Assistance Review, several changes have been implemented to improve the efficiencies of the Forest range program. There is an additional emphasis on data collection and the TEAMS enterprise group

has improved our ability to complete NEPA projects on time. None of these changes have required any adjustments in the Forest Plan range objectives.

Recreation

Monitoring Requirements

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

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

Unroaded Areas. Monitoring will be reported based on a representative assessment of two backcountry areas per year. This will include the assessment of motorized and non-motorized recreation trail use, levels and type of use, areas of conflicts, identification of areas of concentrated use, and other resource impacts (biological and physical). Backcountry areas will be evaluated relative to Forest Plan goals and objectives and S&Gs.

Wild and Scenic Rivers. Monitoring will be reported based on the assessment of resource-management activities that occur within one river corridor every 3 years. River corridors will be evaluated relative to Forest Plan goals and objectives and S&Gs every 3 years.

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

State of the Resource

Developed Recreation.

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

***Developed Sites*:** The Saguache Ranger District maintained 6 campgrounds, 2 picnic areas, 4 rental cabins, and 12 trailheads to standard. This included an assessment of hazard trees and the removal of hazard trees at 6 campgrounds.

Recreation site improvement (RSI) funds and other funds were used to replace 5 toilets on the Divide Ranger District. Hazard trees were identified and removed within the Big Meadows Campground. Furthermore, major campground reconstruction started on the bottom loop (approximately 17 sites) and removal of 2 toilets, which are scheduled for replacement in FY 2010.

On the Conejos Peak Ranger District, RSI funds were used to replace one toilet at Aspen Glade Campground, 1 toilet at Spectacle Lake Campground, and 2 toilets at the Lake Fork Campground. Granger-Thye dollars were utilized in FY 2009 to replace 24 picnic tables and 24 fire rings at the Spectacle Lake Campground. Fire rings are accessible for those with disabilities, and the work was done by the Antonito Casa Start Program who volunteered their time to this project.

RSI funds and other funds were used to replace toilets on the Saguache Ranger District including Brewery Cabin and Stone Cellar Cabin. Campsite improvements (i.e., site leveling, accessibility improvements, and replacement of all amenities with accessible amenities and natural resource restoration work) took place at Poso (11 sites) and North Crestone (13 sites) Campgrounds. The work was done by the Saguache recreation crew, Americorps, Southwest Conservation Corps, and the San Luis Valley Public Lands Center road crew.

The campground concessionaire, AL&L, operated 26 campgrounds, 6 picnic areas, 5 trailheads, and 2 boat ramps to standard on the Conejos Peak and Divide Ranger Districts. In addition to the sites maintained by AL&L, the Divide Ranger District maintained 17 trailheads and 10 day-use recreation sites, and 4 additional campgrounds (Cathedral, Ivy Creek, Lost Train, and Rio Grande Campgrounds) to standard. Aside from AL&L, the Conejos Peak Ranger District maintained nine trailheads to standard (Chama Basin, Adams Fork, Three Forks, Ruybalid, Red Lake, Continental Divide National Scenic Trail [CDNST] #813, South Fork, Rock Creek, and Elk Creek Trailheads) and the Alamosa and Stunner Campgrounds to standard. Additionally, AL&L also monitored the Alamosa and Stunner Campgrounds by helping to clean bathrooms and clean camping areas.

The Saguache Ranger District operated and maintained 7 campgrounds (including one BLM campground), 2 picnic areas, and 16 trailheads to standard. The District also maintained one BLM day-use recreation site to standard.

***Ski Area*:** Summer and winter operating plans for the Wolf Creek Ski Area were completed and approved in FY 2009. The master development plan (MDP) needs to be updated before any further development is authorized at the ski area.

Special Uses: The Divide Ranger District administered 11 outfitter/guide special use permits to standard and 59 recreation special use permits to standard. The Saguache Ranger District administered 5 outfitter/guide permits to standard and 1 recreation special use permit to standard. The Conejos Peak Ranger District administered 25 total permits—17 to standard.

Outfitter/Guides:

Divide Ranger District:

- Outfitter/Guides: 25 total (5 administered to standard in FY 2009)
- Recreation Events: 5
- Organized Camps: 1
- Shelters (Yurts): 3
- Recreation Residences: 41 (permits were re-issued in FY 2008; however, during FY 2009 completed 6 typical lot appraisals. Direction to implement new fee structure is still pending.
- Resorts: 2
- Target Range: 1
- Summary for FY 2009: 12 special-use permits issued and administered to standards.

Conejos Peak Ranger District:

- Outfitter/Guides: 12 total (7 to standard in FY 2009).
- Recreation Events: 3 total (3 to standard).
- Recreation Residences: 9 permits; 3 lot appraisals (6 to standard).
- Shelter (Yurts): 1 permit (1 to standard).

Saguache Ranger District:

- Outfitter/Guides: 6 total (6 administered to standard).

Dispersed Recreation.

***Trails*:** Trail condition surveys were completed as follows. Divide Ranger District completed three trails—Bennett Creek, Fern Creek, and West Lost Trails. Conejos Peak Ranger District completed two trails—North Zapata and Ruybalid. Approximately 403 (from RGNF WP targets) miles of trails on the Forest received maintenance while more than 472 miles of trail, both motorized and non-motorized, met standards. Additional work was performed on about 1.0 mile of trail on the Continental Divide National Scenic Trail (CDNST) with two volunteer groups (Continental Divide Trail Alliance and Colorado Trail Foundation). Trail work conducted with grants provided by Colorado State Parks included the following: (1) installation of 400 feet of boardwalk through a wetland, (2) maintenance/re-construction of 6.0 miles of the Fern Creek Trail, and (3) maintenance of 175 miles of Forest-wide motorized trail. The re-routed southern portion of CDNST #813 (which was re-routed in FY 2008 due to a timber sale to remove beetle infested timber) is still in effect; however, now that the timber sale is complete, it is anticipated that the original route will be re-opened in the fall of FY 2010. The Saguache Ranger District, San Juan Youth Works, an SCC Crew and an outfitter guide maintained 88.6 miles of trails as follows: Black Canyon, Simmons Peak, Indian, Indian Cut-off, East Middle, Middle, Wild Cherry, Cotton, Rito Alto, Willow Lake, South Crestone, Kelly Creek, Elk Horn, North Crestone, Major, Hot Springs, Garner, Machin Basin, Brewery, Soda Springs, San Isabel, Middle Fork, Halfmoon Pass, South Fork, an unnamed trail, and Twin Peaks.

Travel Management: The Forest continued to update the INFRA database to accurately reflect previous travel management decisions in preparation for publication of motor vehicle use maps (MVUMs) in 2009. Implementation of the 2005 Travel Rule is scheduled for January 1, 2009, when MVUMs were posted on the RGNF webpage and maps were made available to the public. The ranger districts are continuing to review and update the MVUMs for the public on an annual basis.

ATV Big Game Retrieval: The Forest continued efforts to monitor ATV big game retrieval in 2009. Informal interviews were conducted with hunters to determine the extent to which they understood the afternoon big game retrieval policy. One-half of the hunters interviewed were aware of this policy and about 4 percent of the hunters came to the RGNF because of this policy. Seven percent of the hunters interviewed said that they would hunt elsewhere if the ATV big game retrieval was no longer permitted. About 13 percent of the hunters interviewed used ATVs to retrieve legally killed game. No resource impacts were observed as a result of legally retrieving game. Resource impacts were observed from the use of ATVs on the Forest, but it could not be specifically attributed to afternoon big game retrieval.

Unroaded Areas. In 2007, the Secretary of Agriculture accepted the Governor of Colorado's petition for a State-specific roadless rule. Rule making has been on-going since that time. The Forest continues to work to correct errors to the inventoried roadless area boundaries.

Wild and Scenic Rivers: Wild and scenic river corridor monitoring was not performed in FY 2009. One river corridor should be monitored every 3 years or during project-level planning within a river corridor. Wild and scenic river corridor monitoring is scheduled for 2010. The Saguache Ranger District plans to monitor an eligible wild river corridor of Saguache Creek in 2010.

Wilderness: Wilderness monitoring took place on the La Garita Wilderness area. This monitoring included campsite density monitoring and trailhead registration monitoring. Results indicate that resource standards are being met on the La Garita Wilderness Area. Overall, the Forest Plan recreation and wilderness objectives are being met. Air quality challenge was met this year for the South San Juan Wilderness Area. Saguache Ranger District conducted wilderness monitoring as described above under Divide Ranger District's section that included La Garita Wilderness and Sangre de Cristo Wilderness.

Noxious weeds are an element addressed in the Chief's 2007 "Ten Year Wilderness Stewardship Challenge." The South San Juan and Weminuche Wilderness areas have approved noxious weed treatment plans. These plans were reviewed to ensure continued compliance with the Chief's challenge.

Research and Information Needs

Monitoring Requirements

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

State of the Resource

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

Research Natural Areas (RNAs)

Monitoring Requirements

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

State of the Resource

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

Road Construction, Closures, and Decommissioning

Monitoring Requirements

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

State of the Resource

In 2009, 30.8 miles of unclassified road were decommissioned on the Forest. Approximately 188 miles of classified and unclassified roads have been decommissioned since 1996.

Scenic Resources

Monitoring Requirements

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

State of the Resource

Forest areas were monitored for scenic resources, and some were not in compliance during FY 2009. In order to obtain scenic resources objectives, a project should comply with scenic integrity objectives (SIOs) within 2 years after project implementation. These areas will continue to be monitored for changes.

Wolf Creek Ski Area has been notified of the recommended changes to the entrance walls and has agreed to stain the concrete color to comply with SIOs. Newly built walls and warming huts are not yet in compliance; however, the plan is to modify the colors to bring the walls and facilities into compliance by FY 2010. The Wolf Creek project is ongoing.

The Highway 160 Expansion Project is being monitored for SIOs. The new construction at the Lake Fork Trailhead and parking area is complete as of November 2009 and meets the SIO of "high." Previous construction projects are as follows: retaining wall staining marginally meets the SIOs for the corridor above the new tunnel construction. Rock cuts across from the Fun Valley Campground Resort do not meet the Forest Plan SIOs as mapped high; however, the rock cuts can be considered to meet the SIO of "moderate" to "low." Changes to the Colorado Department of Transportation (CDOT) specifications were made and the new phase of the project better meets the SIO by increasing texture on rock cuts, soil-nail walls, and the use of darker stains on rock walls near the ice age sign at the Lake Fork Trail Head. In addition, blasting techniques are being monitored to assess whether they meet SIOs due to the use of pre-slit blasting along a visually sensitive portion of Highway 160. Monitoring will continue along the highway on tree removal, storage areas, wall staining, seeding, and replanting to assess whether they meet the SIOs for the Highway 160 corridor. The rock storage area is continually monitored and is coming into compliance as revegetation continues; however, the rock storage is still in continual use. These areas will continue to be monitored through project completion approximately year 2011. New berms were built in October 2009 to mitigate activities at the rock storage area, and vegetation was placed on the road side to rehabilitate this area. It is expected that rehabilitation will take several years until the project is completed along the Highway 160 corridor.

County Line Timber Sale is still being monitored since 2008 for changes to the SIO. It currently does not meet the SIO of moderate because of the harvesting activities and a blowdown event. This area will be continually monitored for changes to the scenic resources.

North Clear Creek Falls does meet the SIO of "high" along the Silver Thread Scenic Byway. Due to construction, it now meets the health and safety requirements (with the exception of an old toilet still in use, but this will be replaced in the summer July 2010). Additional construction will expand the parking and continue the trail. Visitors were driving off road at this site during FY 2008 while under construction; however, steps have been taken to improve this (including law enforcement). This site will be continuously monitored until the project is closed out in 2011.

There is a need to make changes to the Forest Plan's scenic resource direction during the next Forest Plan revision to update the S&Gs.

Soil Productivity

Monitoring Requirements

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

State of the Resource

The Forest soil resource is monitored through project evaluations and soil health assessments. In FY 2009, several projects were reviewed. Soil health is the assessment of the current soil health condition and its ability to sustain the potential natural community of vegetation for the long term. The Forest uses the established Forest Plan S&Gs as a basis for evaluation. The three types of soil health ratings are as follows: (1) properly functioning, (2) at-risk, and (3) impaired. Properly functioning means that soil physical, biological, and chemical properties are functioning in a manner that maintains soil productivity. At-risk means that some soil feature has been changed to where there is a risk of losing productive capacity through erosion, nutrient losses, or loss of surface cover. Impaired means that erosion has been occurring at accelerated rates or that there are unmitigated impacts, such as compaction.

Monitoring Site #1: *Rangeland Health Monitoring of Allotments within the South Saguache and Grayback-Pintada analysis areas*. Soil health assessment continued on these analysis areas in the summer of 2009. Over the broad extent, soils were meeting Forest Plan desired conditions within the allotments. Isolated concern areas were described and documented.

Monitoring Site #2: *Big Moose Analysis Area*. Soil health was evaluated in the analysis area, focusing on potential harvest units. Acres of detrimental soil conditions in each unit were determined and will be used to determine where additional mitigation may be needed to ensure Forest Plan standards are met if harvest does occur in these areas.

Monitoring Site #3: *Rito Hondo Prescribed Burn Area*. This prescribed burn area was evaluated by an interdisciplinary team. Soil impacts were for the most part within prescription with regard to cover and intensity with some localized exceptions. Vegetation is responding well and ground cover is reestablishing.

Special Interest Areas (SIAs)

Monitoring Requirements

Monitoring will be reported based on on-site inspections of designated special interest areas every 5 years.

State of the Resource

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

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

Timber

Monitoring Requirements

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

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

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

State of the Resource

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

Onsite field monitoring during the summer of 2009, primarily within past timber sale boundaries, is 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 such as shelterwood and uneven-aged management, has been consistently successful with natural stocking from surrounding seed tree sources. The naturally occurring annual addition of new trees in mixed conifer forests has resulted in adequate stocking.

In 2009, certification of natural regeneration without site preparation was accomplished on 1,098 acres of the Million Fire Salvage Sale. In addition, first-year survival surveys were conducted on four units totaling 160 acres of 2008 fall planted areas in the Million Fire Salvage Area. The average survival was 59 percent and ranged between 12 and 76 percent. Third-year survival surveys were conducted in one 48-acre unit in the Drill Pad Salvage Sale with a 35 percent survival, and one 18-acre unit in the West Fork Salvage Sale had a 74 percent third-year survival percent. Fifth-year survival surveys were conducted in one 17-acre unit in the Drill Pad Salvage Sale; it had 26 percent survival. Five units totaling 60 acres in the Twister Salvage Sale had an average 79 percent fifth-year survival percent, and ranged between 67 and 91 percent.

A combination of poor planting stock, heavy competition from grass and forbs, or harsh planting sites attributed to the poor survival rates in some of the units. An assessment will be made in the spring of 2010 on the steps needed to ensure an adequate stocking level.

Timber Suitability. The Forest amended the Forest Plan in 2000 with Amendment #4 to address timber suitability. The suitability amendment took effect in 2003 after USFWS consultation with the updated Forest Plan BA. Timber suitability has been, and will continue to be, evaluated during the landscape and project-level planning phase for all timber sales.

The NEPA decision on the Burro-Blowout EA was signed in June 2009. NEPA planning continued in 2009 on the Rio de los Pinos project, with a DEIS released in December 2009 and a FEIS expected in the spring of 2010. NEPA also continued on the Big Moose Vegetation Project EIS begun in 2008. NEPA was started on the

Del Norte Peak Salvage project in November of 2009, with a decision expected in February 2010. No other planning projects were initiated in 2009. A determination of suitability for these projects was completed in previous years, which allowed the projects to move forward to the NEPA analysis stage.

Insect and Disease Infestations. Forestry personnel, with the assistance of entomologists out of the Gunnison Forest Health Protection Service Center, have been actively monitoring insect and disease activities across the Forest. While there has been some success in control activities, the overall condition of forest health is declining with serious levels of insect outbreaks, likely related to the extended drought and mild winter temperatures. Additionally, many of the areas with insect and disease problems occur in the habitat and habitat linkages for the Canada lynx. Control strategies for effectively treating stands affected by insect and disease populations within lynx habitat are subsequently limited. A summary of the ongoing activities across the Forest follows:

***Divide District – Del Norte*:**

Upper Rio Grande: The upper Rio Grande was survey for spruce beetles in 2009. These areas include Hunters Lake, Shaw Lake, Lime Creek, Fisher Mountain, Red Mountain, Stage Station Flats, Minnie Mountain, Finger Mesa, Black Mountain, Bristol Head, and Spring Creek Pass Areas. Very high concentration of spruce beetles were found in Lime Creek, Fisher Mountain, Stage Station Flats, and Minnie Mountain. The other areas had high to moderate concentrations of spruce beetle. Future timber sales are being planned for these areas, and they will continue to be monitored in 2010.

Blowout Pass Area:

- Blowout II Beetle Salvage Timber Sale was sold in 2006 and was monitored for spruce beetle in 2008. Additional beetle-infested trees were marked and added to the timber sale contract within the existing sale area boundary. These trees were cut and removed prior to the contract termination on January 23, 2008. This and surrounding areas were monitored for beetle activity and disease in 2008 and again in 2009, and will continue to be monitored in 2010.
- Marble Beetle Salvage Timber Sale was also sold in 2006 to treat spruce beetle infested trees in the Blowout Pass Area. It was monitored for spruce beetle in 2008, and again in 2009. This and surrounding areas will continue to be monitored for beetle activity and disease in 2010.
- Burro Blowout EA (Burro Blowout Analysis Area) was initiated in 2007 to treat the ongoing spruce beetle population in the Blowout Pass Area. A NEPA decision was made in June 2009. The first sale from this NEPA decision, Bennett I Beetle Salvage Sale, was sold in September 2009, and first harvest is expected to begin in 2010. Bennett II Beetle Salvage Sale is expected to be offered in 2010. This and surrounding areas were monitored for beetle activity and disease in 2009, and will continue to be monitored in 2010.

Rock Creek Beetle Salvage Timber Sale: This sale was sold in 2008, after significant spruce beetle populations were discovered in 2005 and NEPA planning was finalized in 2007. Harvest began in 2009, and surrounding areas were monitored for beetle activity and disease in 2008 and again in 2009, and will continue to be monitored in 2010.

Finger Mesa Beetle Timber Sale: This sale was sold in 2004 and was monitored for spruce beetle in 2008. Additional beetle-infested trees were marked and added to the timber sale contract within the existing sale area boundary. These trees were cut and removed prior to the contract termination on August 10, 2008. This and surrounding areas were monitored for beetle activity and disease in 2008 and again in 2009, and will continue to be monitored in 2010.

Twister II Beetle Salvage: This sale was sold in 2004 and was monitored for spruce beetle in 2008. Additional beetle-infested trees were marked and added to the timber sale contract within the existing sale area boundary. These trees were cut and removed prior to the contract termination on September 2, 2008. This and surrounding areas were monitored for beetle activity and disease in 2008 and again in 2009, and will continue to be monitored in 2010.

Shaw Lake Beetle Salvage Timber Sale: This sale was sold in 2005. Minor harvest activity occurred in 2007 and 2008. This and surrounding areas were monitored for beetle activity and disease in 2008 and again in 2009, and will continue to be monitored in 2010.

Big Moose Analysis Area: The Big Moose Vegetation Project EIS was initiated in 2008 after a significant spruce beetle population was discovered in the Fern Creek and Love Lake area in 2007. A NEPA decision is planned for the winter of 2010, with harvest first beginning in 2011. This and surrounding areas were monitored for beetle activity and disease in 2009, and will continue to be monitored in 2010.

Wolf Creek Ski Area: The area experienced spruce beetle infestation in 2008. Surveys, and marking and removal of infested trees occurred under permit in the summer of 2008 and 2009. This and surrounding areas were monitored for beetle activity and disease in 2009, and will continue to be monitored in 2010.

Del Norte Peak Blowdown: Approximately 75 acres of blowdown occurred just north of Del Norte Peak in the fall of 2009. A small sale is currently being proposed to log 45 acres of this blowdown and is expected to be implemented in 2010. Monitoring of spruce beetle will continue in this area in 2010.

Conejos Peak District – La Jara:

Grouse Timber Sale: This 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 (Grouse II Salvage Timber Sale) was sold in 2006, focusing on the removal of the ongoing spruce beetle infestation. Based on monitoring, an additional Grouse III Salvage Timber Sale was offered for sale in 2008 to treat the ongoing spruce beetle infestation, but the apparent high bidder did not pass the financial audit, and so it was re-offered in 2009. A bidder was found and so this sale is now underway. This and surrounding areas were monitored for beetle activity and disease in 2008 and again in 2009, and will continue to be monitored in 2010.

County Line Analysis Area: Monitoring of the ongoing spruce beetle infestation continued in the County Line Analysis Area in 2009, with significant spruce beetle activity noted in the area. This and surrounding areas were monitored for beetle activity and disease in 2009, and will continue to be monitored in 2010.

- Escarabajo Salvage Timber Sale was sold in 2007, the second salvage sale in the County Line Area. Harvest activities occurred in 2008 and 2009. This and surrounding areas were monitored for beetle activity and disease in 2008 and again in 2009, and will continue to be monitored in 2010.

Wolf Beetle Salvage Timber Sale: This sale was sold in 2006. Monitoring for spruce beetle occurred in 2007 and 2008, and harvest activities are planned to continue in 2009. This and surrounding areas were monitored for beetle activity and disease in 2009, and will continue to be monitored in 2010.

Spruce Park Salvage Timber Sale: This was sold in 2008 and harvest is planned in 2009. This and surrounding areas were monitored for beetle activity and disease in 2009, and will continue to be monitored in 2010.

Spruce beetle activity was discovered in the Big Lake, Lake Fork, and Red Mountain/Cornwall Mountain areas in 2005. Additional windthrow was observed on Cornwall Mountain in 2008. Consideration is being made to open this area up for firewood cutting or offer it up as a small salvage timber sale.

- Cerro Rojo Salvage Timber Sale was offered in 2006. Treatment continued in 2008 with additional trees being marked for removal. Additional monitoring of this area occurred in 2008 and again in 2009. This sale terminated March 30, 2009. This and surrounding areas will continue to be monitored for beetle activity and disease in 2010.

Neff II Salvage Timber Sale: This sale was sold in 2008 and harvest activities commenced in 2009. This and surrounding areas were monitored for beetle activity and disease in 2009. Additional beetle activity was observed outside of the sale area in 2009. This area and surrounding areas are planned to be surveyed by ground crews in 2010.

Saguache District – Saguache:

Antelope/Trickle Stewardship Contract: This contract was sold in 2004. It was prepared for sale to treat mountain pine beetle in ponderosa pine. The sale was terminated in 2008 for convenience of the government. These areas are currently being treated using commercial firewood contractors. This and surrounding areas were monitored for beetle activity and disease in 2009, and will continue to be monitored in 2010.

McIntyre Gulch Salvage Timber Sale: Sold in 2007, this sale was prepared for sale to treat mountain pine beetle in ponderosa pine and lodgepole pine and western spruce budworm in Douglas-fir. Harvest activities began in 2008. All harvest activities were completed in 2009. Final sale completion is expected in the spring of 2010. This and surrounding areas were monitored for beetle activity and disease in 2009, and will continue to be monitored for beetle activity and disease in 2010; however, management of most of the area surrounding the sale is restricted due to the Forest Plan MA prescription.

Little Kerber Salvage Timber Sale: This sale was sold in 2006. This sale was completed in September 2009, but continues to be treated using commercial firewood contractors. This and surrounding areas were monitored for beetle activity and disease in 2009, and will continue to be monitored in 2010.

MOAB Salvage Timber Sale: This sale was sold in 2009. This area experienced a heavy wind event in June 2008. As a result, approximately 37 acres of timber were nearly 100 percent wind-thrown or wind-damaged, and an additional 20 acres were severely wind-thrown or wind-damaged. This sale was prepared to remove these trees and eliminate the threat of spruce beetle infestation. Harvesting of this sale began in 2009 and will continue in 2010. This and surrounding areas were monitored for beetle activity and disease in 2009, and will continue to be monitored in 2010.

Insect and disease (I&D) surveys on the east side of the ranger district identified a defoliator in the oak brush on BLM lands. A severe outbreak of western spruce budworm in the Sangre de Cristo Wilderness was also observed. Juniper trees within riparian areas across the Forest are also experiencing a severe decline suspected to be caused by wind-borne fungi. This and surrounding areas were monitored for insect and disease activities in 2009, and will continue to be monitored in 2010.

Bowers Peak Blowdown: Approximately 50 acres of irregularly distributed spruce blowdown occurred in the area surrounding Bowers Peak in the early fall of 2009. Some areas of heavy blowdown occurred along a heavily used recreation trail, which subsequently was cut out to re-open the trail to use. An assessment was made as to the salvage-ability of the spruce. Due to the steepness of the country, difficult access requiring several miles of constructed roads, location near streams and other sensitive areas, and the relatively small amount of volume (about 100 mbf), although there are some large-size spruce involved, it was recommended not to pursue a salvage operation. This and surrounding areas will be monitored in 2010 to re-evaluate an economical and cost-effective salvage or treatment option.

I&D surveys confirmed suspected areas of sudden aspen decline (SAD) on the north end of the ranger district. In the Bonanza area, I&D surveys will continue in the Little Kerber, Ute Pass, and Columbia Gulch areas, because mountain pine beetle is still very active in those areas.

The RGNF is working with the Gunnison Service Center, based in Gunnison, to prepare a Forest-wide insect and disease assessment. This project was initiated in early spring of 2009 and is due to be completed by late spring 2010.

Harvest Openings. Harvest openings from past, current, or proposed timber management have not approached, and are not expected to approach, the National Forest Management Act (NFMA) 40-acre limit. Harvest openings occurring as a result of uneven-aged management are generally less than 1 acre. Final harvest unit sizes for even-aged systems such as 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, and prior to enactment of NFMA. Most are fully stocked with sapling or pole-sized trees and are no longer determined to be openings.

The Big Moose Vegetation Project EIS proposes to clearcut or prescribe burn aspen in excess of the 40-acre opening restriction. A need has been determined to restore declining aspen in areas where large stands are either becoming decadent from old age, suffering from drought or climate-related factors, or are being overtaken by encroaching Engelmann spruce and subalpine fir. Small openings, less than 40 acres in size, quickly succumb to the effects of over-browsing/grazing by the large elk populations in the area. And natural disturbance events that contributed to the expansiveness of aspen on the landscape were rarely confined to 40 acre disturbances or openings. Regional Forester approval will be sought to exceed the 40-acre opening restriction, which can be allowed if the practice is in line with ecological restorative processes.

Past harvest units are periodically inspected during routine reconnaissance visits that occur with monitoring stand development over time and to ensure they remain on planned trajectories. Any significant and noticeable changes potentially affecting stand development are brought to the attention of the attending silviculturist.

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/summary (PAR/PAS). PAR/PAS timber resource outputs for FY 2009 are displayed in the following table.

Item[1]	Measure	Planned	Accomplished	% Accomplish-ment
FOR-VEG-EST Planting	Acres	0	0	0.0
FOR-VEG-EST Natural Regeneration Surveys & Certification	Acres	1,000	1,098	109.8
FOR-VEG-IMP Precommercial Thinning, Weeding, Cleaning, Release	Acres	50	50	100.0
Timber Volume Offer	CCF	24,000	26,205	109.2
Timber Volume Sold	CCF	24,000	22,463	93.6

[1] FOR-VEG-EST = Forest vegetation establishment; FOR-VEG-IMP = Forest vegetation improvement.

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

- Continue Forest-wide assessments for insect and disease infestation to address the current outbreaks.

5. Interdisciplinary Monitoring Team Contributors

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Appendix: Rio Grande National Forest Monitoring and Evaluation Accomplishments

This appendix synopsizes the monitoring actions and results for FY 2009. The monitoring items listed below correspond with the components listed in table V-1 from the 1996 revised Forest Plan, as amended.

Monitoring Item	Method and [Contact]	Planned Locations	Monitoring Accomplished (What, where, results, summary, and references?)	Evaluation (What are the recommendations based on monitoring? Are changes needed to the Forest Plan?)
Air Quality				
Monitor and evaluate (M&E) visibility, lake chemistry, and terrestrial systems [36 CFR 219.27 (a)]. M&E burn plan [36 CFR 219.27 (a)].	(1) Photographic documentation of visibility; coordinate with NPS [P. Reinholtz].	Great Sand Dunes National Park.	Visibility and particulate monitoring was completed.	No changes in the Forest Plan recommended.
	(2) Chemistry of most sensitive lakes [K. Garcia, J. Fairchild, Lisa McClure, K. Murphy, P. Reinholtz].	3 lakes in the Weminuche Watershed Wilderness Area (WA); 2 in the South San Juan WA; 2 in the La Garita WA; and 1 in the Sangre de Cristo WA.	Sampling was completed at all 8 lakes. These results are available to define current good conditions and appropriate control technology when new major polluting sources are proposed that could impact these wilderness areas.	No changes in the Forest Plan recommended.
	Visual verification of smoke dispersal [L. Floyd, P. Reinholtz] and compliance with Colorado APCD permit (L. Floyd).	Prescribed burn project locations on all three ranger districts.	Appropriate conditions existed on all burn projects, therefore no adverse smoke impacts occurred and smoke dispersal was adequate. No complaints were received from the public.	No changes in the Forest Plan recommended.
Assess air resources relative to (a) Forest-wide goals, objectives, S&Gs; (b) MA prescription objectives, DCs, and S&Gs; (c) MA prescription allocations and monitoring methods [36 CFR 219.12 (k)].	From monitoring results, conclude whether S&Gs and regulations are being followed, and if desired conditions are being met [P. Reinholtz].	As a result of monitoring all the above sites.	Forest management activities are following S&Gs; desired conditions are being achieved.	No changes in the Forest Plan recommended.
Monitor and evaluate	(1) Photographic documentation	Great Sand Dunes National	Visibility and particulate monitoring was	No changes in the Forest Plan

Monitoring Item	Method and [Contact]	Planned Locations	Monitoring Accomplished (What, where, results, summary, and references?)	Evaluation (What are the recommendations based on monitoring? Are changes needed to the Forest Plan?)
(M&E) visibility, lake chemistry, and terrestrial systems [36 CFR 219.27 (a)].	of visibility; coordinate with NPS [P. Reinholtz].	Park.	completed.	recommended.
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 [hydrologist: P. Reinholtz].	Timber sales: Evaluation of the Big Moose Project continued into 2009.	No new large timber project analysis areas were evaluated. Small timber sales that relied on a programmatic EA or categorical exclusion (CE) included Divide Blowdown and Del Norte Commercial Firewood. No new watersheds of concern.	From past work it appears that concern levels for total watershed disturbance have been set at a conservative level to ensure adequate watershed health. No changes in the Forest Plan recommended.
M&E stream and riparian health [36 CFR 219.27a].	(1) Level III stream assessment on one stream per 6th -level watershed for each EA analysis area. By comparing to a like reference stream, assess water quality, channel condition, and riparian function to measure amount, if any, of impairment [hydrologists: P. Reinholtz, Negussie Tedela].	As described in the next column.	Stream health assessments were completed on several streams during timber and range EA or CE analysis: *Divide RD Range EA*: Nicomodes and Bonafacio Gulch, Horseshoe Park, tributaries to Rock Creek. Two small tributaries to Rock Creek were noted with high bank alteration. *Saguache RD Range EA*: Mill, Hat Springs, Moon, Allen, Sawlog, Poso, Cave, and Grouse Creeks. North and Middle Fork Carnero Creek. Reaches with high alteration were noted on Mill Creek, Upper North Fork Carnero, Middle Fork Carnero, and Allen Creek. Historical and long-term impacts including increased stream width and hummocks remain to varying degrees on these creeks. *Conejos Peak RD Range EA*: Jim Creek, Rough Creek. Localized bank instability was attributed in part to livestock use.	Stream health direction in the Plan is appropriate. No changes in the Forest Plan recommended.

Monitoring Item	Method and [Contact]	Planned Locations	Monitoring Accomplished (What, where, results, summary, and references?)	Evaluation (What are the recommendations based on monitoring? Are changes needed to the Forest Plan?)
			Pass Creek continues to be fully protected from Wolf Creek Ski Area activities. East and West Willow Creeks and Windy Gulch were monitored as part of the Willow Creek mined land reclamation project. The Forest is participating with the Willow Creek Reclamation Steering Committee.	
	(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: P. Reinholtz].	Mill Creek.	Multiple indicator assessment was undertaken on Mill Creek as part of long-term monitoring.	No changes in the Forest Plan recommended. Continue monitoring to evaluate livestock use on recovery and recommend management changes if necessary. Continue monitoring of this site.
	(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 [hydrologists: P. Reinholtz, Negussie Tedela].	Workman Creek within the Big Moose analysis area.	Stream health in Workman Creek drainage was assessed to determine recovery from clearcuts that occurred in the late1960s. Riparian and stream health was found to have recovered well. Some localized, minor sediment input occurs at old road crossings. A permanent cross-section was established and pebble count data collected.	No changes in the Forest Plan recommended.
Assess aquatic resources [36 CFR 219.12 (k)].	Visually determine if S&Gs have been implemented and are achieving the desired conditions [hydrologists: P. Reinholtz, Negussie Tedela].	Timber, range, and watershed specialists routinely evaluate past and ongoing projects for compliance with Forest Plan direction.	Implementation monitoring occcured during timber sale and range allotment administration including: Wolf Beetle Timber Sale, Rock Creek Timber Sale, Long Lost Cabin Timber Sale; S&Gs effective.	No changes in the Forest Plan recommended.
Biodiversity				
Monitor change in occurrence of selected native	(a) Ripley milkvetch: use plots and transects [CSU Ph.D. candidate: J. Burt; ecologist: D.	Hick's Canyon and Terrace Reservoir.	Intensive plot monitoring completed by researcher J. Burt. Data collection and evaluation finished. Results indicate that	No changes in the Forest Plan recommended. Based on the results of this study, the Forest

Monitoring Item	Method and [Contact]	Planned Locations	Monitoring Accomplished (What, where, results, summary, and references?)	Evaluation (What are the recommendations based on monitoring? Are changes needed to the Forest Plan?)
species (fine filter) [36 CFR 219.27 and .19 (6)].	Erhard].		the population demographics for this species are primarily influenced by moisture availability. Results also indicate that grazing by domestic livestock does not reduce Ripley milkvetch (*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.	has decided to end intensive monitoring of this species. The Forest will continue extensive monitoring.
	(b) Rio Grande cutthroat trout (RGCT), chub, and sucker (native fish population monitoring); utilize electrofishing and gill nets. [Forest fish biologist: B. Wiley; FS/BLM seasonal employees, CDOW].	Numerous streams and lakes across the Forest are monitored for population status, genetic purity, and whirling disease.	RGCT populations monitored include: North Fork Carnero, Middle Fork Carnero, Cave Creek, Whale Creek, East Pass Creek, Alberta Park Reservoir, and Black Mountain Lake. All population data were collected following CDOW protocols and entered into CDOW database. CDOW "2009 Fisheries Inventories Rio Grande Basin" includes detailed analysis for these populations (unpublished). Stream culverts that were fish migration barriers were replaced on Benino Creek, Groundhog Creek, and Perry Creek. Rio Grande sucker and Rio Grande chub populations were monitored in Middle Fork Carnero and North Fork Carnero. Nonnative trout fisheries monitored include Middle Creek, Bennett Creek, Rio Grande, South Fork Rio Grande, and Poage Lake. CDOW "2008 Fisheries Inventories Rio Grande Basin" includes detailed analysis for these populations (unpublished).	No changes in the Forest Plan recommended.
	(c) Boreal toad: monitoring and survey [CDOW, FS].	Four existing sites were monitored (Jumper Creek , Trout Creek, West Trout Creek, and Little Squaw creek). All four of these sites monitored by USFS. One additional site	*Known Sites*: West Trout Creek visited 1 time and again supported the highest number of individuals, with at least 2 adults and an estimated 1,000+ tadpoles. Two visits were made to the Jumper Creek site. One adult female found.	No changes in the Forest Plan recommended. The fact that 3 of the 4 occupied toad sites on the Forest have tested positive for chytrid

Monitoring Item	Method and [Contact]	Planned Locations	Monitoring Accomplished (What, where, results, summary, and references?)	Evaluation (What are the recommendations based on monitoring? Are changes needed to the Forest Plan?)
		(Boots Pond) monitored by CDOW. Goose Lake site not monitored in 2009. Based on genetic work, the genus for the boreal toad was changed from *Bufo* to *Anaxyrus*. The local haplotype is now referred to as *Anaxyrus boreus boreus*.	Boots Pond monitored by CDOW. No information available. No new sites discovered in 2009. One ranger district reported habitat impacts due to elk at a current breeding site.	fungus (*Batrachochytrium dendrobatidis*) or "Bd" remains a concern and needs further evaluation to determine if additional monitoring and/or protection efforts are needed. Additional educational awareness is recommended concerning Bd and the 2001 Interagency Conservation Agreement for this species.
	(d) Peregrine falcon: ocular surveys of nests [CDOW, FS].	One new potential eyrie discovered on Forest in 2008. New total is potentially 9 known nest sites on Forest and 2 on other public lands within Forest administrative boundaries.	Of 9 known exisitng sites, 2 were monitored by FS. No CDOW monitoring reported. Of the sites monitored, all were suspected to be inactive. No new potential site located.	No changes in the Forest Plan recommended.
	(e) Southwest willow flycatcher (SWFL) [FS, USFWS, CDOW]	Mapped habitats on RGNF. Project-specific sites for range allotments were surveyed on a project-specific basis.	Surveys were conducted on 2 of 3 ranger districts, based on mapped habitat and project-specific range allotments. No "SWIFLs" detected. Ground-truthing of habitat maps continued on 2 ranger districts. In-depth multi-year monitoring reports were completed by each ranger district and reported to the regional office. Approximately 60% of the potential habitat on the RGNF has been surveyed to date, and categorized to a habitat classification. Suitable habitat comprises approximately 10% of the mapped habitat surveyed to date.	No changes in the Forest Plan recommended.
	(f) Black swift (BLSW): surveys of nests [RMBO].	RGNF sites included in the state-wide Monitoring Colorado Birds (MCB) survey.	Little information on black swift surveys was available from the RMBO in 2009. Nine breeding sites known on the RGNF, with no new sites reported. Surveys at additional possible site reported in 2008 were inconclusive although 5 indivdiual "BLSW" were detected in East Trout Creek. State-wide survey work continues to provide baseline data on population	No changes in the Forest Plan recommended.

Monitoring Item	Method and [Contact]	Planned Locations	Monitoring Accomplished (What, where, results, summary, and references?)	Evaluation (What are the recommendations based on monitoring? Are changes needed to the Forest Plan?)
			size and geographic (State-wide) distribution that will be needed to establish a (State-wide) population management plan. A local site on adjacent BLM lands was again used for banding of adults and young for a long-term assessment of productivity and survival.	
	(g) Bats: surveys [CDOW]	CDOW and FS bat surveys of known mine locations and sample sites on the Forest.	In FY 2009, information on bat species decreased significantly due to the adjustments being made to the BIMP Program by the CDOW. Local surveys for bat species did not occur on Forest. No additional information on bat species was provided.	No changes in the Forest Plan recommended. Additional NFIM funding recommended to supplement bat inventory program.
	(h) MIS birds [FS and RMBO]	The MCB implmented a new grid-based avian montoring program for Colorado in 2008. 10 grid sites were established and monitored on the RGNF. FS personnel and contractors also surveyed the original 15 supplemental transects on the RGNF. Project-specific inventories continued to be conducted on the RGNF.	The Rocky Mountain Bird Observatory (RMBO) conducted the second year of surveys for the MCB program using the new grid transect design on the RGNF. None of the Forest supplemental transects were monitored. Although we are still early in the transition period between the former and new MCB sampling design, the information collected to date suggests that only 2 of the 6 avian MIS species are being adequately sampled on the RGNF. Project-specific inventory results are incorporated into project analyses and data are recorded in unpublished reports and internal databases, such as NRIS Wildlife. Presence of MIS avian species were confirmed on proposed project sites on all ranger districts.	No changes in the Forest Plan recommended. It is recommend that a status assessment of the Forest avian MIS Monitoring Protocol (2005) be conducted to provide needed updates and determine if additional supplemental transects are needed to meet MIS monitoring goals.
	(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-	Habitats for MIS and FS sensitive bird species have been modeled to establish an estimated baseline for avian MIS. These habitat models and other GIS data sets were available for use during project-	No changes in the Forest Plan recommended. Recommend a status assessment for Forest MIS bird habitat monitoring, especially

Monitoring Item	Method and [Contact]	Planned Locations	Monitoring Accomplished (What, where, results, summary, and references?)	Evaluation (What are the recommendations based on monitoring? Are changes needed to the Forest Plan?)
		truthed at the project level.	level surveys and analysis. Site-specific habitat availability and occupancy was documented through project inventories. However, habitat monitoring information to assess condition and trend over time is lacking, particularly for willow-riparian associated MIS. Concerns regarding riparian habitat conditions for MIS birds were reported by one ranger district.	riparian-willow dependents (Wilson's warbler and Lincoln's sparrow).
	(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 for 2009 are provided by the CDOW. Based on the 1991–2009 data, populations have widely fluctuated over the modeling period, but generally have not met herd objectives in each of the 4 DAUs. The population models indicate that two of the four deer DAUs that occur on or partially on the RGNF are estimated to be near objective (98%), while the others are at 80% and 46% of objective. Population estimates for elk in the Forest's 4 DAUs for 2009 are provided by the CDOW. Based on the 1991–2009 data, population estimates for elk in the Forest's 4 DAUs widely fluctuate over the modeling period, but are consistently above herd objectives. The population models conducted by the CDOW for 2009 indicates that all four elk DAUs remain above objective by 28% to 200%. DAU E-11 on the east side of the Valley represents the primary unit of concern in regards to high populations.	No changes in the Forest Plan recommended. The current situation for both mule deer and elk are being addressed by DAU population adjustments by CDOW and an established Interagency Science Team on the east-side of the Valley. Recommend a status asssessment for both species as MIS on the Forest and whether habitat data are being adequately collected and assessed.
	(k) Deer and elk habitat [FS]	Habitat effectiveness is evaluated on a site-specific basis by project.	General winter range assessments conducted concluded that winter range habitat was adequate to support big game numbers. However, one ranger district reported concerns with a lack of early	No changes in the Forest Plan recommended. Recommend a status assessment for mule deer habitat conditions to determine

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			seral habitat for mule deer on summer range. Road closures were implemented to reduce road effects on big game. Road density was not considered a major factor on habitat in the Forest Plan. Mule deer and elk habitat, based on road densities, generally are considered in the mid-range Forest-wide, but could be variable on a site-specific basis by project. No ranger districts reported road densities as a primary concern for big game species.	if habitat is contributing to consistently low mule deer numbers, particularly in DAU D-37 on the east side of the Forest, or if there are other contributing factors.
Monitor the change in selected species habitat (coarse filter) [36 CFR 219.27].	(a) Other EIS special-status plants. Photo interpretaion site visits, GIS, satellite imagery [ecologist: D. Erhard].	Special-status plants are at various sites over the Forest.	A site visit was made to known *Astragalus ripleyi* sites (a Forest Service designated sensitive plant) and they appeared stable and secure. New occurrences of *Astragalus ripleyi* were found this year.	No changes in the Forest Plan recommended.
	(b) Snag-dependent species [FS].	Species inventories by project. Habitat is Forest-wide.	There are at least 63 wildlife species in Colorado whose numbers are strongly associated with snag habitat. Variable observations of snag-dependent species were conducted in conjunction with some proposed projects. Local data were also collected during MCB program. Unusually high numbers of species such as American three-toed woodpeckers continued to be noted in association with bark beetles in spruce/fir forest types. Habitat monitoring is scheduled every 5 years.	No changes in the Forest Plan recommended. Recommend effectivenss assessment of snag retention associated with timber sales and firewood cutting. Complete Forest-wide Monitoring Assessment for snags in 2010.
	(c) Animal TEPS except those addressed above and those that can be covered under the riparian wetland objective [FS].	Species inventories by project or in cooperation with other agencies. Habitat is Forest-wide.	One species, New Mexico meadow jumping mouse, was added to the Forest TES list in 2009. Species inventories were conducted in conjunction with proposed projects. TEP surveys are ongoing (Canada lynx, CDOW; Uncomphagre fritillary butterfly, USFWS; Mexican spotted owl and southwestern willow flycatcher, FS, by	No changes in the Forest Plan recommended. *For Uncomphagre fritillary butterfly*: Conduct analysis and possible section 7 consultation for the Halfmoon Pass UFB site on the Sauguach RD when that particular allotment is up for

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			project). Sensitive species surveys are conducted by project or in conjunction with contracted surveys. RMBO and BBS surveys document presence of avian species on the Forest. *Results for FY 2009 include*: **Lynx**–As of August 2009 the CDOW was still tracking 37 of the 100 reintroduced lynx that could still be alive from the total of 218 animals. After no reproduction reported in 2007–08, 5 dens were reported in 2009 that produced 10 kittens. In addition, 2 dens produced young from adults that were both Colorado-born kittens. **Uncompahgre Frittilary Butterfly**–Surveys in 2009 again included additional inventories of Conejos Peak site on the RGNF. This represents the third visit to this area. However, no site visits to this area or elsewhere resulted in the confirmation of any new Uncompahgre fritillary butterfly (UFB) populations. Ongoing qualitative monitoring of the eleven confirmed populations, including the 4 sites on the RGNF, indicated population persistence at 8 of the 11 sites. Presence was not detected at 2 of the 4 sites on the RGNF. The populations at 3 sites on the GMUG NF were again quantitatively sampled using previously placed transects to produce estimates of population size. Draft population estimates and trend analysis were conducted. The conservation issues (trespass cattle) reported for 1 site on the RGNF in 2007 were not observed in 2009 by the UFB crew or during a visit by that individual ranger district. Section 7 consultation for this site is still recommended when that particular	renewal. *For Mexican spotted owl*: Provide report to FWS that recommends removing the MSO from the PLC Unit. *For boreal owl and goshawk*: Recommend review of communication procedures between timber sale administration and protection of wildlife sites in timber sale areas. *For sensitive and other species*: Recommend funding and updating the Forest Plan BE to include new sensitive species from 2007 and 2009 regional updates, and update information on other species.

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			allotment is updated. **Mexican Spotted Owl–**MSO surveys were not conducted on the RGNF in 2009. All available information suggests the species could be removed from the unit species list for section 7 consultation purposes. *Additional surveys for certain R2 sensitive species were reported by 2 of 3 ranger districts in 2009; species and results include*: **Boreal owl–**No specific surveys reported. Current nest boxes monitored and 10 additional boxes installed. 4 chicks produced out of 11 existing boxes. New boxes installed on Saguache Ranger District. **Goshawk–**1 ranger district reported surveys conducted for project clearences. The same ranger district monitored 4 of 5 known nesting territories. 1 new nest located, 2 of 4 other nests active. **Bighorn Sheep–**All 3 ranger districts conducted some amount of survey and/or habitat assessment work for BHS. Only 2 ranger districts reported efforts. Conducted inter-agency counts on 2 ranger districts which contributed to population and distribution knowledge. **Other–**Additional survey efforts reported by 1 to 2 ranger districts for wolverine (bait stations), flammulated owls (nest boxes installed), northern leopard frogs (no detections), bald eagle (no detections), three-toed woodpecker (numerous detections with +21 nests located in 1 timber sale area), OS flycatcher (several detections), WT ptarmigan (several detections), American marten (1 detection), Gunnison prairie	

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			dog (several detections), loggerhead shrike (limted detections), and Brewer's sparrow (limited detections). The first documented river otter on the RGNF was found from a road kill in the upper Rio Grande basin, indicating that the species is present on the Forest.	
Monitor changes in composition, structure, and pattern for each LTA [36 CFR 219.27].	Photo interpretation, GIS, satellite imagery, and/or spatial analysis [ecologist/wildlife biologist].	All LTAs over the entire Forest.	No monitoring was required this year. This item is evaluated once every 10 years and was accomplished in 2006.	No changes in the Forest Plan recommended.
Validate the vegetation composition and structure of LTA 1 reference landscapes [36 CFR 219.27].	Photo interpretaion, GIS, satellite imagery, and/or site visit [ecologist: D. Erhard].	14 reference areas within Englemann Spruce on Mountain Slopes LTA. Found throughout the upper elevations of the Forest.	The IRI Center has completed the contract mapping and attributing of common vegetative unit (CVU) polygons on the Forest. The updated vegetation data is being used in relevant spatial analysis work, where feasible, and within the scope of the original modelling concept.	No changes in the Forest Plan recommended.
Monitor changes in CNHP Significant Plant Communities listed in EIS [36 CFR219.27].	Photo interpretaion, site visits, GIS, and/or satellite imagery [ecologist: D. Erhard].	Special-status plant communities are at various sites over the entire Forest.	Several Colorado Natural Heritage Program (CNHP) plant communities of special interest were visited as follows: (1) *Carex aquatilis* herbaceous vegetation; (2) *Salix monticola* mesic forb shrubland; and (3) *Salix planifolia* mesic forb shrubland. The sites appeared stable and there were no apparent threats.	No changes in the Forest Plan recommended.
Monitor the progress of old-growth (Mehl 1992) inventory and reconnaissance on the Forest.	Ocular, plots, GIS, and/or satellite imagery ecologist, wildlife biologist, forester].	Forest-wide.	Old-growth inventories were completed for the following projects: Burrow Blowout Timber Sale, Baca Mountain Tract Amendment, Rio de los Pinos Timber Sale, San Isabel Creek Fuels Reduction, and Del Norte Peak Commercial Firewood. 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	No changes in the Forest Plan recommended. The Forest continued its progress toward inventorying old growth this year.

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			productivity being too high. Because the Mehl criteria are biased toward more productive sites, the Saguache Ranger District appears to generally lack the productive capability to meet the Mehl old-growth descriptions.	
Evaluate biodiversity and wildlife [36 CFR 219.12 (k)].	Ocular, plots, transects [ecologist, wildlife biologist].	Forest-wide.	The ecologist and District biologists visited more than 20% of the Forest's ongoing projects in conjunction with biological assessments and evaluations. Monitoring did not indicate that biodiversity items in 36 CFR 219.12 (k) were in need of change.	No changes in the Forest Plan recommended.
Fire and Fuels Management				
Assess fire/fuels [36 CFR 219.12 (k)].	Ocular estimates using photo guides for estimating downed woody fuels. Fuel transects and surveys to determine actual loading and arrangement. Onsite inspections [AFFMO, ecologist, and silviculturist].	Ponderosa pine and mixed-conifer cover types (fire regimes 1 & 3, condition class 2 & 3), Forest-wide. Wildland/urban interface/intermix (WUI) areas.	Analysis and evaluation of fuel profiles (loading, arrangement, continuity) was conducted in various mid- to low-elevation areas (mixed conifer, ponderosa pine, Douglas fir) of the Cochetopa Hills, the Alamosa and Upper Rio Grande River drainages 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, Conejos River, Baca/Crestone and South Fork areas.	Continue focus on WUI areas and fire regimes 1 & 3 in condition classes 2 & 3. No changes in the Forest Plan recommended.
General Infrastructure				
Assess facilities for compliance with state and Federal requirements and FS Handbook/Manual	(1) Inspect dams, facilities, drinking water, road and trail bridges, and FDRs for safety and maintenance [Forest engineer].	50% of Forest road bridges; high-hazard dams every 3 years; medium-low hazard dams every 5 years; 25% of all trail bridges; 25% all drinking-	44% of bridges inspected in FY 2009. No high-hazard dams are located on the Forest: all moderate- and low-hazard dams were inspected in FY 2006.	No changes needed in Forest Plan monitoring requirements. Inspections and testing will continue as outlined.

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direction.		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.	All trail bridges were inspected in FY 2005. 23% of facilities were inspected in 5-year FY 2009 period. 0% of water and wastewater systems were inspected in FY 2009 period. Level 3, 4, and 5 road inspections were determined by random statistical sample in FY 2009. All assigned targets were inspected in FY 2009.	
	(2) On-site inspections to monitor compliance with Travel Management Plan [law enforcement officers (LEOs), district level II officers, and other personnel as assigned].	Various locations around the Forest as patrolled by Forest LEOs and other Forest Personnel.	Inspections were conducted through hunter patrols and day-to-day contacts by LEOs and other FS personnel. Numerous issues were raised and some citations issued. Forest continues to seek compliance with the current MVUM.	No changes in the Forest Plan recommended.
	(3) Assess planned road closures through onsite inspections [engineering and timber].	Various locations across the Forest.	Onsite inspections were made by Forest personnel of proposed closures of illegal routes. In the fall of 2006 (FY 2006), the Forest conducted an onsite investigation to evaluate closure activities of illegal routes. A combination of treatments that effectively closed illegal routes were implemented. The treatments included subsoiling, installing carsonite or cedar closure posts and signs, brushing in illegal routes, and physical rock barriers. The efforts continued in FY 2009. The ultimate success of such treatments is determined over time. Additional evaluation will be made in FY 2010 to determine how well hunters and other recreationists complied with the closures.	No changes in the Forest Plan recommended.
M&E infrastructure [36 CFR 219.12 (k)].	Review and monitor infrastructure-related inspections and reports for compliance with Forest Plan guidelines and objectives [Forest engineer].	As outlined in the Infrastructure section of the AMOP.	44% of bridges inspected in FY 2009. No high-hazard dams are located on the Forest: all moderate- and low-hazard dams were inspected in FY 2006.	No changes in the Forest Plan recommended.

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			All trail bridges were inspected in FY 2005. 23% of facilities were inspected in FY 2009. 0% of water and wastewater systems were inspected in FY 2009. Level 3, 4, and 5 road inspections were determined by random statistical sample in FY 2009. All assigned targets were inspected in FY 2009.	
Health and Safety				
M&E Forest activities with respect to National Health and Safety Codes and Occupational Safety and Health Administration guidelines.	Review and monitor guidelines on public safety and health [Forest engineer/safety officer].	Forest.	All contract "Notice To Proceed" meetings include a safety review. Road crew tailgate meetings are held weekly and include project work zone safety requirements discussion. Road crew supervisor ensures compliance. Monthly safety meetings are held to discuss accidents and near misses. Facilities safety inspections were completed in FY 2009.	No changes in the Forest Plan recommended.
Heritage (Cultural) Resources				
M&E projects to assure heritage resources have been appropriately protected.	Onsite inspection of selected significant heritage resources (Priority heritage assets). Onsite inspection of National Register-eligible heritage resources identified for protection during ground-disturbing project-related activities [heritage specialist, A. Krall].	Identified significant heritage resources including prehistoric open lithic and campsites, rock art, prehistoric stone structures and historic buildings. Heritage resources located on selected range allotments, timber sales, and/or prescribed fire projects.	Significant heritage resource sites monitored in FY 2009: 5RN314: Fitton GS 5RN315: Off Cow Camp 5RN330: Dog Mountain Petroglyphs 5ML329: Clay Mine 5SH1446: Prehistoric Lithic Site Results:	No changes in the Forest Plan recommended.

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			5RN314/5RN315 are being adversely impacted by cattle. ARRA funds will be utilized to restore and protect structures in 2010. 5ML329: A condition assessment was completed. It was found that a private land owner will not grant access to the site for site rehab. 5SH1446: Livestock are loafing on the site and causing substantial soil erosion. Trees will be felled on the site in 2010 to discourage use by livestock. 5RN330: Reported to be in good condition.	
M&E consultations with American Indians.	Assess proposed management activities and programs to determine if American Indian consultation was accomplished [heritage specialist: A. Krall].	Review proposed project EAs where there is a potential for sites or geographic features that are, or have the potential to be, considered culturally sensitive to American Indians.	In FY 2009, Tribal consultation was initiated through the Tribal Consultation Bulletin, individual projects, scoping letters, and by the RGNF's quarterly Schedule of Proposed Actions (SOPA).	No changes in the Forest Plan recommended. The Tribal Consulation Bulletin should be issued as the initial Tribal contact for major projects or those smaller proposals with the potential to affect areas that are culturally sensitive to consulted America Indian Tribes.
M&E heritage resource program [36 CFR 219.12 (k)].	Review of all heritage resource reports done in the current monitoring year [heritage specialist: A. Krall].	Review of all heritage resource reports done in FY 2009.	Reports for proposed projects sent to the Colorado State Historic Preservation Officer for concurrence were reviewed.	No changes in the Forest Plan recommended. Proposed Projects comply with 36 CFR 219.2 (k).
Minerals				
M&E oil & gas activities so effects do not exceed predicted by 10%.	Compare annual and cumulative oil and gas activity [minerals specialist].	Forest summary.	There was no oil and gas development on the Forest in 2009. The Forest Plan reasonable and foreseeable development scenario and its predicted effects are still valid as described in the Forest Plan.	No changes in the Forest Plan recommended.
Verify if areas are	Verification form [minerals	Each lease.	There was no oil and gas development on	No changes in the Forest Plan

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compatible with Forest Plan stipulations. Assess if occupancy could be allowed on the lease tract [36 CFR228.1.2 (e) 1, 2, 3].	specialist].		the Forest in 2009. The Forest Plan reasonable and foreseeable development scenario and its predicted effects are still valid as described in the Forest Plan.	recommended. No additional analysis is needed.
M&E minerals program [36 CFR 219.12 (k)].	Onsite inspections of mineral activities; review reports [minerals specialist].	Forest summary.	Two plans of operation for exploration drilling were approved. The Forest Plan is an effective tool for protecting resources while allowing mineral development.	No changes in the Forest Plan recommended. No additional analysis is needed.
Noxious Weeds				
M&E noxious weeds [36 CFR 219.12 (k)].	Monitoring of noxious weeds (where and to what extent they are present) will be reported based on the evaluation of control methods on infested areas on the forest/BLM [Valley-wide weed coordinator].	Inventory efforts focused primarily on FDR road systems. Treatment and inventory work is continuing within the South San Juan Wilderness and inventories are being conducted within the Weminuche to locate and control infestation of yellow toad flax, canada thistle, and new infestations of downey brome (cheatgrass). Treatment continues on all three ranger districts and on BLM Lands adjacent to the Forest at known infestion sites.	Forest-wide inventories were conducted on all three ranger districts and adjacent BLM in 2009. Specific information on species found and areas infested and treated/inventoried can be found in ranger district records. 870 acres were treated by chemical and hand pulling control means on the Forest and 300 acres on BLM.	No changes in the Forest Plan recommended.
Assess the extent of infestation and control methods of noxious weeds.	Monitor noxious weed infestations and control methods by using on-the-ground surveys.	See above.	The Forest and BLM have combined funding to hire a Valley-wide weed coordinator to ensure a more coordinated treatment effort on public lands under jurisdiction	No changes in the Forest Plan recommended.
Range				
M&E range program [36 CFR 219.12 (k)].	Refer to monitoring items that follow (see below).	See below.		

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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 23,500 acres were identified and 2 cover frequency transects and utilization cages were installed on the Forest.	No changes in the Forest Plan recommended.
	(2) Monitor desired condition for trend [primary: G. Snell; secondary: T. Post, Kelly Garcia, L. Van Amburg].	See above.	See above.	No changes in the Forest Plan recommended.
Assess rangeland suitability.	(1) Evaluate suitability of Forest Plan rangelands. Intensive review at site-specific areas while applying criteria for capability and ID Team determination of suitability [primary contact: G. Snell; secondary: T. Post, K. Garcia, M. Swinney].	A rangeland suitability determination by specific allotments was undertaken for NEPA as per R2 RAMTAG.	Rangeland suitability assessments were initiated in 2005 and continued into 2009.	No changes in the Forest Plan recommended.
	(2) Evaluate suitability of rangelands at the AMP level [primary contact: G. Snell; secondary: T. Post, K. Garcia, M. Swinney].	See above.	See above.	No changes in the Forest Plan recommended.
Monitor utilization of rangelands.	Various mehods will be used including: P/U cages, height-weight, stubble height, and ocular estimates [primary contact: G. Snell; secondary: K. Garcia, T. Post, M. Swinney].	Each ranger district will conduct analysis based on Forest Priority Rescission Act Allotments.	Monitoring for vegetation utilization was conducted on all 3 ranger districts. About 350,000 acres were monitored for vegetation utilization. Various methods were used, including P/U cages, height-weight, stubble height measurements, and ocular estimates. Allotments monitored by ranger districts were the same as the planned locations in previous column.	No changes in the Forest Plan recommended.
Recreation – Developed				
Assess developed sites for (a) visitor expectations, trends, and customer	(1) Customer survey; Forest-wide market and customer survey [Forest and ranger district recreational personnel].	Forest-wide.	The last Forest-wide customer survey was completed in FY 2005. The next survey is planned for FY 2010. Information from the FY 2005 customer	No changes in the Forest Plan recommended.

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satisfaction; and (b) quality and safe facilities.			survey on the RGNF is on the website at http://www.fs.fed.us/recreation/recuse/recuse.shtml.	
	(2) Annual developed-site hazard tree inspections. Inspection of Forest's campgrounds and picnic areas for removal of hazard trees [I&D specialist and ranger district recreation/timber personnel].	Campgrounds and picnic areas.	Annual hazard tree inspections of campgrounds and picnic areas were completed as part of the sites' preseason maintenance inspections. Hazard trees were marked and removed. Hazard tree inspection reports are on file at ranger district offices. In addition, water sampling for safe drinking water is completed on a monthly basis.	No changes in the Forest Plan recommended.
	(3) Monitor ski area summer and winter activities. Monitor Wolf Creek Ski Area for compliance with approved summer/winter operating plans [S. Brigham].	Wolf Creek Ski Area.	FY 2009 winter and summer operating plans were developed and approved and monitoring inspections made. Inspection reports are on file at the Divide Ranger District office. Winter inspections included lift operations, ski patrol operations and procedures, avalanche procedures and operations, ski school operations, annual billings and payments and the monitoring of the cross country ski trail and use. Continued activities include: construction of the new parking area access road and erosion control work in the vicinity of the parking lots.	Continue to work with the ski area in conjunction with planned projects. No other changes in the Forest Plan recommended.
	(4) Monitor special use permits. Inspections documented and/or inspection reports MAR 62.5 [Forest and district recreation personnel].	Forest recreation residences, outfitter guides (O/G), recreation events, and concession permits.	Annual billings and issuance of special use permits is now done in SUDS. The Forest continued to administer a majority of its special use permits.	A screening checklist is also required when determining whether to permit recreation events for compliance with FSM2721.49, FSH 1909.15, 30.3-2 and the terrestrial BA/BE. No other Forest Plan changes are recommended.
Assess developed sites actual use compared with projected outputs [36	Use figures collected by concession campground managers and FS campground	All concession and FS campgrounds and picnic sites.	Campground use and occupancy rates were recorded in our Forest concession campgrounds by the concession managers. Use reports are on file at the	No changes in the Forest Plan recommended.

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CFR 219.12 (k)].	hosts in our fee campgrounds.		Forest's Supervisor Office. The Saguache District does not have concession campgrounds. The Forest continued work on the recreation site facilities analysis and reviewed occupancy rates for developed fee sites.	
Evaluate developed recreation [36 CFR 219.12 (k)].	Comparative evaluation for M&E report [Forest and district recreation personnel].	Forest-wide developed-recreation prescription areas.	Forest recreation objectives, Forest-wide standards, recreation management area standards, desired conditions, S&Gs, and monitoring were assessed in conjunction with proposed project assessments.	No changes in the Forest Plan recommended.
Recreation – Dispersed				
Evaluate traditional and nontraditional recreation opportunities.	(1) Trail log inventory using GPS (MAR 62.3, 64.3) [Forest trails specialist and district trail coordinators].	10–15% of Forest trails.	Almost all Forest trails have been inventoried and entered into INFRA. Maintenance was completed on almost 500 miles of trail.	No changes in the Forest Plan recommended.
	(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 be evaluated during permit re-issuance evaluation.	We will look at our calculations to determine if our baseline figures are correct and if so, what management actions might be needed. No other changes in the Forest Plan recommended.
Monitor effects of off-road vehicle use of Forest trails and roads [36 CFR 295.5].	Assess impacts to physical, biological, and social resources (indicators) [Forest recreation specialist/RSST].	Hunter patrols during hunting season.	Hunter patrols were implemented again during the hunting season. Patrols indicate we are getting high levels of use and impacts off designated roads and trails. The Forest emphasized monitoring of afternoon ATV big-game retrieval.	No changes in the Forest Plan recommended. The Forest continues updating the Motor Vehicle Use Maps. Future travel management planning efforts are planned.
Evaluate dispersed recreation [36 CFR	Comparative evaluation for M&E report [Forest and district	Forest-wide dispersed Rx areas.	Forest dispersed-recreation objectives, Forest-wide standards, management area S&Gs and guidelines, desired conditions	No changes in the Forest Plan recommended.

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219.12 (k)].	recreation personnel].		and monitoring were assessed in conjunction with proposed project assessments.	
Recreation – Unroaded Areas				
Assess the physical, biological, and social resources within backcountry areas.	Assess the impacts on the physical, biological, and social resources (indicators) [Forest recreation specialist and RSST].	Forest-wide backcountry areas.	The Forest worked with the regional office to support the State of Colorado Roadless Rule Environmental Impact Statement. This work included correcting previous mapping errors of inventoried roadless areas.	No changes in the Forest Plan recommended at this time pending the completion of the Colorado Roadless Rule Environmental Impact Statement and ROD.
Evaluate backcountry areas [36 CFR 219.12 (k)].	Comparative evaluation for the M&E report [Forest and district recreation personnel].	Forest-wide backcountry areas.	Forest backcountry area objectives, Forest-wide standards, management area S&Gs, desired conditions and monitoring were assessed by ranger district staff. Mapping errors found in the Forest's inventoried roadless areas (most of these were allocated to "backcountry") boundaries have been corrected to support the on-going Colorado Roadless Area rulemaking.	Corrections to the Forest's inventoried roadless areas were completed to support the on-going Colorado Roadless Area rulemaking.
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 Forest boundary and the transfer of the Medano Creek Scenic River to the National Park Service. No wild and scenic river corridors were monitored this year.	The Baca Mountain Tract Amendment to the Forest Plan is expected in the fall of 2009 (FY 2010). The Forest boundary and management adjustments will be made when that decision is signed. No other changes in the Forest Plan recommended.
Evaluate Wild and Scenic River MA prescription objectives, desired	Comparative evaluation for the M&E report [Forest and district recreation personnel].	Forest-wide Wild and Scenic River MA.	The wild and scenic river standards, desired conditions, allocation and monitoring were reviewed.	No changes in the Forest Plan recommended.

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conditions, and S&Gs [36 CFR 219.12 (k)].				
Recreation – Wilderness				
M&E visitor-use levels and other wilderness resources [36 CFR 293.2].	Schedule for implementation those priority 1 items outlined in each wilderness area wilderness implementation schedule. Surveys, data gathering, and reports [District wilderness coordinators, wilderness rangers, and resource specialists).	South San Juan, Weminuche, Sangre de Cristo, and La Garita Wilderness Areas.	With the enactment of P.L. 106-530, the Great Sand Dunes National Park and Preserve Act, a need was created to address changes to the wilderness section of the Forest Plan in addition to adjusting the Forest Plan alternative G 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 implemented new special orders and high lake water sampling for air quality. The Sangre de Cristo area is continually monitored by the recreation staff at the Saguache Ranger District.	The Baca Mountain Tract Amendment to the Forest Plan is expected in the fall of 2009 (FY 2010). The Forest boundary and management adjustments will be made when that decision is signed. The wilderness team is assessing those compartments where some standards have been exceeded and developing recommended management actions. No changes are needed to the monitoring indicators outlined in the wilderness EA (which amended the Forest Plan).
Evaluate wilderness Forest-wide goals, objectives, S&Gs, and wilderness MA objectives, desired conditions, and S&Gs [36 CFR 219.12 (k)].	Comparative evaluation for the M&E report [Forest recreation specialist and district wilderness coordinators].	Forest-wide wilderness MAs.	The wilderness team has prioritized and monitored wilderness compartments to evaluate whether standards are being met or exceeded.	Continue to monitor wilderness compartments.
Research and Information Needs				
Determine progress of accomplishing needed research [Items listed on the top of page V-16 of the Forest Plan].	Questionnaire [Forest staff].	Poll Forest resource specialists on progress.	Progress is continuing on (1) watershed-based inventories for old growth in conjunction with proposed timber harvest activities; (2) Forest roads inventories; and (3) collection of floral and faunal occurrence data for inclusion in the	No changes in the Forest Plan recommended.

Monitoring Item	Method and [Contact]	Planned Locations	Monitoring Accomplished (What, where, results, summary, and references?)	Evaluation (What are the recommendations based on monitoring? Are changes needed to the Forest Plan?)
			Colorado Natural Heritage Program Biological Database. Under the Natural Resource Information System (NRIS), a civil rights project is ongoing to develop methods of identifying under-served communities.	
Research Natural Areas (RNAs)				
Evaluate RNAs [36 CFR 219.12 (k)].	Ocular, plots, transects, GIS [ecologist: D. Erhard].	Designated RNAs.	The Deadman Creek RNA was visited and visually evaluated. The majority of the RNA appears to be minimally impacted by human activity. Natural processes are the prevailing influence. There was no evidence of any conflict with 36 CFR 219.12 (k).	No changes in the Forest Plan recommended.
Scenic Resources				
Determine if project scenic integrity objectives (SIOs) were met. Assess changes in SIO with respect to ROS.	Onsite or photo-point monitoring [landscape architect: K. Ortiz].	Projects where scenic resources is a key issue, and special areas such as campgrounds, gravel pits, and utility sites.	Many of the sites monitored for 2008 are the same sites monitored in 2009 (relative to meeting SIOs). *Wolf Creek Ski Area*: Site visits showed that the new exterior entrance walls were not in compliance with the SIOs for the site. The color does not borrow from the characteristic landscape. Consultation continues with the Wolf Creek Ski Area operator to make the necessary changes. *Mountain Lion/Lookout Timber Sale*: There are notable contrasts during the winter months on the landscape as viewed from the highway. This area will continue to be monitored. *Highway 160 Project*: Some rock walls do not come into compliance with SIOs, since pre-split holes can be seen. These will continue to be monitored. *Windy Point to Lonesome Dove phase of*	Additional assessment of visual effects from the bark beetle epidemic need to occur during project analysis. In addi tion, more simulations can provide timber coeficients to determine the appropriate level of trees to be left during harvest to still meet the minimum requirements of the Scenic Integrity Objectives. No other changes in the Forest Plan recommended.

Monitoring Item	Method and [Contact]	Planned Locations	Monitoring Accomplished (What, where, results, summary, and references?)	Evaluation (What are the recommendations based on monitoring? Are changes needed to the Forest Plan?)
			the Highway 160 Project: This area is now in compliance. *Lake Fork Trailhead Highway 160 Project*: Is currently in compliance and meeting the SIO of high. The Village at Wolf Creek access analysis identified the need to change the SIO at the Wolf Creek Ski Area to make it compatible with the existing visual situation. North Clear Creek Falls Project Area is in compliance with the SIO of high. New construction has rehabilitated this area; however, final construction will be complete in fall of 2010 with the construction of the trail and expanded parking lot. The *County Line Timber Sale* is not currently in compliance. This area will be continued to be monitored throughout 2010 for any changes to scenic resources. The rock site along Highway 160 west of South Fork has revegeteated but is still in use for construction. However, new berms have been constructed along the highway to mitigate activities within the rock site. The wetland below is in compliance as all fencing was pulled in September of 2009.	
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 2009, because they were awaiting Washington Office approval. However, focus groups were conducted at the Zapata Recreation Site for information on visitor preferences on the San Luis Valley Public Lands Recreation Sites.	No changes in the Forest Plan recommended.
Evaluate scenic resources [36 CFR 219.12 (k)].	Summarize report.	Forest.	Three separate areas were monitored for scenic resource compliance during FY 2009. Under the terms of scenic resources, all areas have 2 years to come into compliance with the SIOs for any	No changes in the Forest Plan recommended. However, terminology in the Forest Plan with respect to the scenic S&Gs should be updated during the

Monitoring Item	Method and [Contact]	Planned Locations	Monitoring Accomplished (What, where, results, summary, and references?)	Evaluation (What are the recommendations based on monitoring? Are changes needed to the Forest Plan?)
			area after project implementation. These projects will continue to be monitored over the next year.	next plan revision.
Soil Productivity				
Assure that land productivity is maintained or improved.	(1) Monitor soil quality standards [(Soil Scientist: Teams--Dustin Walters)	Big Moose Analysis Area.	Overall, potential harvest units within the analysis area are meeting the 15% limit for allowable detrimental soil conditions. On an individual basis, several units are greater than the limit and will require mitigation measures if harvest occurs.	No changes in the Forest Plan recommended. Standards and assessments are adequately working.
	(2) Use erosion model to predict erosion or analyze projects after completion.	No new projects requiring WEPP analysis.		No changes in the Forest Plan recommended.
	(3) Ocular estimates, pace transects, on-site, professional judgements to monitor fertility, erosion, mass movement [soil scientist: Dustin Walters (TEAMS EU)].	Provided on range projects.	Field review found the current grazing management on South Saguache allotments is maintaining and generally improving the soil productivity over the majority of the area and thereby meets the RGNF plan objectives. In the Grayback-Pintada analysis area, of 14 sites evaluated on 5 allotments, only 1 was found to be impaired. Mitigation was proposed in the project NEPA.	No changes in the Forest Plan recommended.
	(4) Mass-movement evaluation by monitoring existing and potential problem areas [soil scientist: Michael McNamara (TEAMS EU)].	The north exclusion zone area within the Rio de los Pinos project area re-evaluated.	There was little to no evidence of past or recent earthflow or soil creep in the section of unit 4 within the north exclusion area. Enough residual trees to provide root strength will be left in harvested stands on the section of unit 4 in the north landslide exclusion block to insure continued slope stability. With application of best management practices (BMPs) and locating temporary roads in less sensitive areas, there is a low risk of road drainage increasing mass failure risk in this area.	No changes in the Forest Plan recommended.

Monitoring Item	Method and [Contact]	Planned Locations	Monitoring Accomplished (What, where, results, summary, and references?)	Evaluation (What are the recommendations based on monitoring? Are changes needed to the Forest Plan?)
M&E soil productivity [36 CFR 219.12 (k)].	Onsite review and use of pre-existing photo points [soil scientist].	Cat Creek Park.	Monitored the long-term success of watershed restoration techniques used by the CCC in 1940 and changes over a 68-year period.	No changes in the Forest Plan recommended.
Special Interest Areas (SIAs)				
Assess protective measures and interpretive efforts.	Ocular surveys [ecologist: D. Erhard; heritage resource specialist: A. Krall].	SIAs.	The botanical area at Hick's Canyon was visually inspected. *Astragalus ripleyi* plants appear to be vigorous and robust. No new concerns were noted. The Wagon Wheel Gap Watershed Experiment Station SIA (historical) was visually monitored. There were no noticeable impacts relating to the area noted during the SIA review.	No changes in the Forest Plan recommended.
Evaluate Special Interest Areas [36 CFR 219.12 (k)].	Summarize reports or information from districts [ecologist: D. Erhard; heritage resource specialist: A. Krall].	SIAs.	The botanical area at Hick's Canyon and the Wagon Wheel Gap Watershed Experiment Station SIAs were evaluated for this component. Monitoring did not reveal that the items in 36 CFR 219.12 (k) were in need of change.	No changes in the Forest Plan recommended.
Timber				
Restocking of harvest areas [36 CFR 219.12].	Stocking surveys [Forest silviculturist/program manager]	All locations/sites planned for 1st-, 3rd-, and/or 5th-year surveys.	In 2009, a total of 77 acres were surveyed or certified as fully stocked within the Twister Salvage Area.	Restocking of harvest areas [36 CFR 219.12]. No changes in the Forest Plan recommended.
Assess timber suitability [36 CFR 219.12; 219.27].	(1) Standard suitability determination at the forest-wide level [Forest silviculturist/program manager]	Forest Supervisor's Office, Monte Vista.	Forest-wide suitability assessments were not planned or completed in 2009.	Assess timber suitability [36 CFR 219.12; 219.27]. No changes in the Forest Plan recommended.
	(2) Standard suitability determination at landscape or project level [Forest silviculturist/	Forest Supervisor's Office, Monte Vista; and District Offices Conejos Peak (La Jara), Divide	Landscape or project-level suitability assessments were also not planned or completed in 2009. Suitability for current	No changes in the Forest Plan recommended.

Monitoring Item	Method and [Contact]	Planned Locations	Monitoring Accomplished (What, where, results, summary, and references?)	Evaluation (What are the recommendations based on monitoring? Are changes needed to the Forest Plan?)
	program manager]	(Del Norte), and Saquache (Saguache).	projects under analysis were previously assessed for suitability in 2007.	
Assess insect and disease infestations relative to endemic levels prior to and following management activities [36 CFR 219.12].	Onsite inspections, observations and limited sampling. Can include statistically accurate plots. [Forest silviculturist/program manager]	All active timber sales, post-sales and ongoing landscape analyses. Areas undergoing extensive natural disturbance.	Insect and disease infestations were surveyed on 15,000+ acres (see the narrative description for details). Surveys were conducted to validate aerial photo flight data and to assess current infestation locations and extent. Surveys corroborated aerial flight data and other observations passed on by Forest personnel. Surveys indicate a large growing population of spruce bark beetle, western balsam bark beetle, western spruce budworm; a moderate growing population of mountain pine beetle, Douglas-fir bark beetle and a moderate infection of sudden aspen decline. Other endemic populations of various insects were also noted in the surveys.	Assess insect and disease infestations relative to endemic levels prior to and following management activities [36 CFR 219.12]. No changes in the Forest Plan recommended.
Monitor size of harvest openings [36 CFR 219.27]	GPS traverses and onsite inspections and reconnaissance. [Forest silviculturist/ program manager]	All current active timber sales and timber sale preparation projects.	All active timber sale boundaries are monitored by sale administrators and harvest inspectors to ensure boundaries have not been altered during harvest operations. At final acceptance of harvest units, boundaries are once again checked, including tests for tracer paint. No irregularity in pre-sale boundary location were noted in inspection reports in 2009. Planned timber sale harvest units that were layed out in 2009 were checked to ensure harvest unit sizes meet accepted opening standards as documented in NEPA decisions. No irregularities were noted. And all units prepared in 2009 meet accepted standards. Some minor amounts of blowdown have occurred around harvest unit openings, but not in sufficient amounts that would create openings in excess of accepted standards for opening sizes.	Monitor size of harvest openings [36 CFR 219.27] No changes in the Forest Plan recommended.

Monitoring Item	Method and [Contact]	Planned Locations	Monitoring Accomplished (What, where, results, summary, and references?)	Evaluation (What are the recommendations based on monitoring? Are changes needed to the Forest Plan?)
Assess implementation of silvicultural objectives during pre-sale, harvesting, and post-sale review periods.	Review silvicultural prescription, onsite inspections, validate before/after photo points, density measurements. [Forest silviculturist/ program manager]	**Pre-sale:** Bennet Beetle I Salvage Bennet Beetle II Salvage El Gato Salvage. **Harvesting:** Beaver Mountain II Escarabajo Salvage Grouse II Salvage Little Kerber Salvage Marble Beetle Salvage McIntyre Gulch Salvage Shaw Lake Beetle Salvage Willow Aspen Wolf Beetle Salvage Grouse II Salvage Neff II Salvage Spruce Park Salvage Ruston Aspen Rock Creek Beetle Salvage Brown's Creek B Salvage Moab Salvage **Post-sale:** Long Lost Cabin Blowout II Salvage Cerro Rojo Salvage Twister II Salvage Finger Mesa Beetle Salvage La Manga II Salvage Cathedral Salvage Spanish Poles 4	Pre-sale reviews indicated that the sales were being prepared to achieve the silvicultural objectives for sales evaluated. Harvesting reviews indicated that the sales were being implemented in accordance with the silvicultural objectives for the sales evaluated. Post-sale reviews indicated that the sales met the silvicultural objectives for the sales evaluated. A post-sale review was condutced in 2009 for the Long Lost Cabin Sale.	Assess implementation of silvicultural objectives during pre-sale, harvesting, and post-sale review periods. No changes in the Forest Plan recommended.
Assess output performance of timber sale program quantity components [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 [Forest silviculturist/program manager]	Forest Supervisor's Office, Monte Vista; and District Offices Conejos Peak (La Jara), Divide (Del Norte), and Saguache (Saguache).	**Silviculture Program:** Forest achieved 1,098 acres of a 1,000 acre planned FOR-VEG-EST target (110%). Forest achieved 50 acres of a 50-acre planned FOR-VEG-IMP target (100%). An additional 849 acres of a 798 acre fuels integrated FOR-VEG-IMP traget was accomplished (119%). Cone Collection project was not implemented due to poor cone crop. Will attempt collection again in 2010. **Timber Program:** The timber sale award	Assess output performance of timber sale program quantity components [36 CFR 219.12]. No changes in the Forest Plan recommended.

Monitoring Item	Method and [Contact]	Planned Locations	Monitoring Accomplished (What, where, results, summary, and references?)	Evaluation (What are the recommendations based on monitoring? Are changes needed to the Forest Plan?)
			was 94% of what was planned (22,463 CCF awarded versus 24,000 planned). Shortfall Reason: No bids received for Lost Aspen (2,378 CCF) and Brown's Creek A Salvage (1,371 CCF).	
Assess timber program [36 CFR 219.12 (k)].	Comparative evaluations [Forest silviculturist/program manager]	Forest Supervisor's Office, Monte Vista; and District Offices Conejos Peak (La Jara), Divide (Del Norte), and Saguache (Saguache).	The Forest reviewed Forest Plan (Forest-wide) desired conditions (goals), objectives, and S&Gs (for silviculture); reviewed MA, prescriptions, and S&Gs for MAs including suitable timberlands (4.21, 4.3, 5.11, 5.13, and 5.41); and reviewed monitoring approaches to timber-related desired conditions. A Regional Log Accountability Audit was conducted on the Forest in 2008. Results of the audit, and action items needing attention, were sent to the Forest Supervisor. The Forest responded to the action items in a response letter. The majority of the action items have been completed; some are ongoing activities needing continued vigilance. A Regional Trust Fund Audit was conducted on the Forest in 2008. Results of the audit, and action items needing attention, were sent to the Forest. The Forest responded to the action items in a response letter in 2009. The majority of the action items have been completed; some are ongoing activities needing continued vigilance.	Assess timber program [36 CFR 219.12 (k)]. No changes in the Forest Plan recommended.