ROUTT NATIONAL FOREST

LAND AND RESOURCE MANAGEMENT PLAN
1997 REVISION

ANNUAL MONITORING AND EVALUATION REPORT
FISCAL YEAR 2001

EXECUTIVE SUMMARY

The purpose of this report is to evaluate and document the results of implementing the Routt National Forest Land and Resource Management Plan (*1997 Revision)* during fiscal year 2001. This report also compares actual outputs and services with those estimated in the Revised Plan, and evaluates data in relation to output trends or environmental effects and identifies any needed changes in Plan direction or project implementation. The result of monitoring helps to determine if there is a need to amend or revise the Plan, and also identifies any potential research needs.

The results of monitoring indicate that implementing the Forest Plan Standards and Guidelines and applied Best Management Practices (BMP's) has resulted in acceptable water quality, soil productivity, and watershed health. Maintaining adequate habitat to protect threatened, endangered, and Region 2 sensitive wildlife species is also being accomplished.

Decisions made by the Chief of the Forest Service in two appeals of the Routt Revised Forest Plan (Appeals #98-13-00-0032 and –0037) received formal Discretionary Review by the Secretary of Agriculture. This review restored the Regional Forester's decisions that had been reversed under the Chief's review. As a result of a change made to appeal instructions under this review, the Forest is required to issue an errata to the Forest Plan relating to how we address matters of instream flow. This errata documentation is pending.

The relocation of a portion of the Luna Lake Trail, deemed necessary because of the effects of the 1997 blowdown, was analyzed in an EA, which resulted in a Decision Notice (May 3, 2001). Because the relocation engendered a reallocation of management prescriptions, a non-significant amendment to the Routt Revised Plan was created. (Amendment #2).

Forest Plan monitoring efforts continue to focus somewhat on the impacts of the October 1997 windstorm, which damaged more than 20,000 acres of forested land in the vicinity of the Mt. Zirkel Wilderness. Forest management activities continue to be focused on addressing the effects of that event. Since the occurrence of the 1997 blowdown, it appears that spruce bark beetle populations are increasing and spreading at a faster rate than was originally predicted, which is of interest to researchers. In addition, there appears to be a continued widespread decline in the health of subalpine fir stands. The Bark Beetle Analysis (Environmental Impact Statement), which was initiated to address these problems, describes alternative actions for treating the infestations.

Special attention needs to be paid to these items:

- Issue an errata that changes page 1-7 of the Revised Forest Plan to require compliance with Section 505 of FLPMA and 36 CFR 251.56 when issuing and re-issuing authorizations for water storage and diversion facilities (Page 18 of the Discretionary Review Decision, March 29, 2001).
- Diligently monitor changes to the resources as a result of the Arapaho Ridge Trail (#1135) decision of October 1, 2001 (Page 18 of this report). This will provide valuable information to help in future decision-making concerning motorized vehicle use on Forest trails.
- Continue to examine the reasons for regeneration difficulties in certain timber harvest areas and find ways to resolve them (Pages 14-15 of this report).
- Make assertive efforts to support research into the matter of regional alpine fir decline, a persistent item in this and past Monitoring and Evaluation Reports (Pages 4 and 11 of this report).

The Forest Interdisciplinary Team has not identified the need to amend or revise the Forest Plan for any of the monitoring items at this time.

Introduction

The purpose of this report is to evaluate and document the results of Forest Plan monitoring that was performed during Fiscal Year 2001. As a result of this monitoring, the Interdisciplinary (ID) Team may make recommendations to the Forest Supervisor concerning the adequacy of the Forest Plan for providing direction to manage the Routt National Forest. Monitoring activities were accomplished by the ID Team and other Supervisor's Office and District resource specialists.

The Revised Routt National Forest Land and Resource Management Plan was approved on February 17, 1998, when Acting Regional Forester Tom L. Thompson signed the Record of Decision. The Monitoring Evaluation Report for fiscal year 2001 includes activities that were performed between October 1, 2000 and September 30, 2001. The ID Team made an effort to monitor projects that were developed and implemented in accordance with the revised Forest Plan Standards and Guidelines.

On October 25, 1997, an intense windstorm occurred along the west boundary of the Mount Zirkel Wilderness, north of Steamboat Springs, Colorado. This event, which is referred to as the Routt Divide Blowdown (blowdown), caused extensive windthrow to Engelmann spruce, subalpine fir, and lodgepole pine trees on approximately 7,600 acres within the Mount Zirkel Wilderness, and an additional 5,300 acres outside the wilderness. Salvage activities related to this blowdown have already taken place, but a spruce beetle outbreak was well developed by 2001. This resulted in an extensive analysis of suppression, direct prevention, and thinning activities in response to this epidemic, which was ongoing during 2001.

Most of the monitoring accomplished during the 2001 field season was related to evaluating the effects of the Routt Divide Blowdown. This included verifying the assumptions made in the North Fork Salvage Analysis FEIS, identifying the effects of the salvage operations, and determining the effectiveness of the mitigation measures that have been implemented. Monitoring also reviewed the effectiveness of several modifications to the Best Management Practices (BMP's), as well as the application of specific mitigation measures developed for the blowdown, which may also have broader application on the Forest.

This report summarizes observations made by the ID Team and compares the accomplishment of specific measurable targets with the outputs predicted in Table S-2 of the Forest Plan, FEIS (1997 Revision). Monitoring implementation of the Forest Plan will evolve from year to year as issues change and more experience is acquired. According to the Revised Plan, monitoring focuses on identifying and analyzing the effects of project implementation, and may result in refining Forest Plan direction when necessary.

Overview of Monitoring: Conclusions and Recommendations

The ID Team did not identify any items that would require an immediate change be made to the Forest Plan. However, there may be a need to alter implementation methods, as well as several other topics that could result in non-significant amendments in the future.

These items include:

- Issue an errata that changes page 1-7 of the Revised Forest Plan to require compliance with Section 505 of FLPMA and 36 CFR 251.56 when issuing and re-issuing authorizations for water storage and diversion facilities (Page 18 of the Discretionary Review Decision, March 29, 2001).
- Diligently monitor changes to the resources as a result of the Arapaho Ridge Trail (#1135) decision of October 1, 2001 (Page 18 of this report). This will provide valuable information to help in future decision-making concerning motorized vehicle use on Forest trails.
- Continue to examine the reasons for regeneration difficulties in certain timber harvest areas and find ways to resolve them (Pages 14-15 of this report).
- Make assertive efforts to support research into the matter of regional alpine fir decline, a persistent item in this and past Monitoring and Evaluation Reports (Pages 4 and 11 of this report).

As a result of monitoring during 2001, the ID Team concluded that the Forest Plan is sufficient for managing the Routt National Forest.

Aerial surveys completed during recent years have indicated an increase in insect and disease activity consistent with the aging conditions of the forest. Damage and mortality due to disturbances such as windstorm, fire, and forest pests are escalating. While this is to be expected on the portion of the forest with low management intensity (wilderness areas, etc.), large-scale damage could adversely affect outputs and management options for the rest of the Forest that is managed more intensely.

Special emphasis needs to be placed on continued monitoring of spruce bark beetle populations within the Routt Divide Blowdown. Even though the blowdown that occurred during the fall of 1997 created a very large acreage of optimal habitat for the beetles, numerous smaller areas in other high-risk stands could also trigger a spruce beetle epidemic. Monitoring completed during 2001 has led entomologists to a confident conclusion that an epidemic is beginning to develop. This growing epidemic has the potential to significantly change the characteristics of the spruce-fir vegetation type on the Forest, which may also cause long-term impacts to the other resources.

Populations of mountain pine beetles on the Routt National Forest are also continuing to escalate at dramatic rates, as evidenced by intense outbreaks in several small timber stands across the Forest. The Troublesome area is particularly hard hit by a mountain pine beetle outbreak. Insect activity and other effects of the Routt Divide Blowdown will continue to be the focus of monitoring on the Forest during the next several years.

Responses to the Monitoring Questions

The Monitoring Questions listed in Chapter 4 of the Forest Plan respond to regulatory requirements and the Goals and Objectives stated in Chapter 1 of the Plan. They were designed to help determine how well the Forest Plan has been implemented. Several Monitoring Questions, however, do not require annual evaluation and reporting. In response to these questions, a note identifies the year that an analysis and evaluation will be reported. These questions involve information that will require several years before any trends can become discernable and established. Where data is displayed but no analysis is completed, the information was collected to ensure that it would be available according to the monitoring schedule.

The information presented here is summarized from specialist reports compiled as part of the FY 2001 monitoring effort. The evaluations and recommendations submitted to the Forest Supervisor were prepared by the Monitoring ID Team and are on file at the Forest Supervisor's Office.

Monitoring Question 1-1: Are long-term soil health and productivity being maintained?

During the past year, soil resource monitoring was done for a variety of projects across the Forest. This work served two main purposes: (1) continued testing of the Region 2 Soil Health Assessment Protocol, and (2) provide additional effectiveness monitoring for the Routt soils program. Also, this was the first year that an integrated approach was used to survey and evaluate the physical characteristics of riparian and stream conditions, and compare them with riparian soil health.

General Conclusions:

Overall, field inspections indicated that implementation of the Best Management Practices (BMP's) is helping to meet Regional soil standards. Problems noted include some road segments needing additional erosion and sediment control, several timber harvest units with vegetation that appears to be inhibiting tree regeneration, and less than adequate retention of coarse woody debris in some harvest units.

Soil resource monitoring included the following activities:

- BMP and mitigation monitoring.
- Erosion bridges.
- Ground cover transects.
- Soil microbial sampling to determine the effects of prescribed burning on the soil.
- The use of sub-soiling to break up compacted soils in the California Park area.

Soil Resource BMP and Mitigation Monitoring:

The BMP's and mitigation measures prescribed in the North Fork EIS were largely derived from the Forest Plan and Region 2 soil standards. Regional standards address soil erosion, compaction, puddling, displacement, and burning. Forest Plan standards include the Regional standards and the Watershed Conservation Practices Handbook guidelines. The effectiveness of the BMP's and other mitigation measures that were implemented to help protect the soil resource are discussed in this report.

Results:

The Best Management Practices and mitigation measures described in the North Fork Salvage FEIS have generally been effective for protecting the soil resource during the blowdown salvage operations. Visual estimates indicated that most of the salvage units are within the limits of Region 2 Soil Standards, which require that detrimental soil conditions be present on less than 15 percent of a project area. Helicopter and short reach cable logging were the dominant methods of timber harvest during the past year. Soil disturbance was less than during previous years when ground-based methods were used to remove the timber.

Ground Cover Transects:

Regional Standards require that a specified percentage of cover remain on the ground after any activity. The amount of cover that is required is based on the erosion hazard class of the soil and whether monitoring occurs during the first or second year after the disturbance.

Results:

It was determined that the amount of effective cover in all the units exceeded the Regional Standards. The percentage of cover ranged from 75 to 95, with an average of 89. The amount of plant cover was low, however, because the units were transected during the same season that they were salvaged. In contrast, the amount of litter/wood cover was high due to the fine slash being left on the sites. Overall, the amount of ground cover was well correlated with unit evaluations in the BMP section. Ground cover transects were done forestwide at approximately 13 different locations. These sites included timber harvest areas, range allotments, and prescribed-burn units. All the ground cover transects will be measured again in 2002.

Soil Microorganism Sampling:

Soil microbial populations are an important indicator of soil and ecosystem health. Grassland soil ecosystems are bacteria dominated, while most shrub and forest soil ecosystems are fungus dominated.

During 2001, two prescribed-burn units were sampled to determine if there were any effects on soil microbial populations due to the burning. The two projects were the Camp Creek burn on the Parks Ranger District and the Long Park burn on the Yampa District. Both of these burns were performed in sagebrush vegetation during spring, immediately after the snow melted.

Results:

The results from both projects indicated that there were no measurable effects from burning on the soil microbial populations. The reports for these projects are on file with the Forest Soil Scientist.

Subsoiling:

A Winged Subsoiler was use to treat approximately 200 acres in the California Park area. This was done to break up soil compaction that was the result of long-term use by cattle and elk. Erosion bridges were placed in the areas that were treated to determine if any soil erosion was caused by the activity. These sites will be measured during the summer of 2002, which will reveal if there is any soil movement.

Conclusion: Monitoring completed during 2001 indicated that the long-term health and productivity of the soils is being maintained. No change to the Forest Plan is necessary.

No change indicated	X
Implementation change needed	
Change to Forest Plan needed	

Recommendations: Continue to monitor the effects of the Routt Divide Blowdown, and subsequent beetle infestations, and related salvage, suppression and direct treatment activities. Monitor other projects to determine the effects of management activities.

Monitoring Question 1-2: Are management activities maintaining or improving air quality including the Mt. Zirkel Wilderness?

Two prescribed burning projects were implemented on the Forest during 2001. The Camp Creek project on the Parks Ranger District consisted of 610 acres, while the Long Creek project on the Yampa Ranger District comprised 203 acres. The type of fuels treated was predominantly sagebrush/grass. Both of these projects were implemented according to the prescription of the site-specific Burn Plans, which considered wind direction in relation to the Mt. Zirkel Wilderness. Neither of these prescribed fires resulted in smoke entering the Mt. Zirkel Wilderness. The site-specific burn plans are on file at the Ranger District Offices for additional information.

Numerous piles of activity generated fuels, (i.e., logging slash) were burned in the Bears Ears and Gore Pass areas and on the Parks Ranger District during the fall months just prior to major snowfall events. The burning was accomplished by only igniting a small number of piles during any single day. The Mt. Zirkel wilderness was not impacted by the smoke from pile burning.

The major smoke producing event during 2001 was the Mad Creek Fire, which was a natural ignition wildfire caused by lightning. This fire was located in the blowdown fuels generated by the severe wind event that occurred during October 1997. The suppression strategy was confinement, which means that the fire was managed by using natural fire breaks and burning out the fuels between the fire and live green timber stands. Limited fire crews were assigned to the fire, with the primary duty of monitoring the progress and conducting burnouts of unburned fuels. The confinement strategy reduced the overall fire suppression costs on the Forest during 2001.

The Mad Creek Fire burned actively for a three week period. Occasional smoke plumes could be visually detected by hikers in the Mt. Zirkel Wilderness, but no closure order of the area was deemed necessary. The Routt County Environmental Health Department monitored air quality during the fire, and no increased amounts of small particulates (less than 2.5 microns) were detected at the monitoring site in downtown Steamboat Springs. The Mad Creek fire will be monitored again during the spring and summer of 2002 to ensure that no more smoke is being produced from the area. Smoke generated by the Mad Creek Fire did not negatively impact the Mt. Zirkel wilderness or the wilderness users.

Conclusion: Monitoring performed during 2001 indicated that the effectiveness of Burn Plans for protecting air quality of the Mt Zirkel Wilderness has been successful. No change to the Forest Plan is required at this time.

No change indicated	X
Implementation change needed	
Change to Forest Plan needed	

Recommendations: Continue to monitor the effectiveness of Burn Plans and other Forest Plan Standards and Guidelines for protecting air quality.

Monitoring Question 1-3: How well are management activities maintaining watersheds in a healthy condition and meeting Colorado water quality standards?

Evaluate current conditions of watersheds for compliance with State water quality standards and review State list of impaired streams: None of the streams on the Routt National Forest are impaired according to the 1998 State 303(d) list. Although no streams are listed as impaired, there are 23 stream segments on the Forest that are on the Colorado State Monitoring and Evaluation List (M&E list) due to the effects of excess sediment. Monitoring was initiated on ten of these streams during the summer of 1998, and all streams on the M&E list have been surveyed at least once between 1998-2001. Monitoring included: 1) evaluating physical stream characteristics using pebble counts, longitudinal profiles, and cross-sections; 2) measuring riparian conditions using greenline surveys and riparian vegetation cross-sections; 3) assessing soil health using soil compaction samples, percent ground cover, and infiltration rates; 4) evaluating biological health using macroinvertebrate sampling and shocking to determine biomass; and 5) measuring basic water quality related to water temperature, pH, and dissolved oxygen. Initial evaluation of the data indicates that the water quality parameters meet the State water quality standards; however, data analysis for the other factors has not been completed. During the period 1999-2001, fourteen stream reference sections were surveyed to determine the conditions of the physical, riparian, soil, and biological factors.

During 2001, a major road and stream restoration project was implemented on Newcomb Creek, which is on the M & E list. This project will help to restore the natural stream dynamics, which were altered during construction of Forest System Road 615. Installation of a box culvert diverted Newcomb Creek to the natural channel at this stream crossing, which will help to restore the dynamic equilibrium. The environmental effects caused by this stream crossing was one of the primary reasons that Newcomb Creek had been placed on the M & E list.

The Forest has worked closely with the Colorado Water Quality Control Division to develop a strategy for evaluating the condition of the streams in question. The 'Provisional Implementation Guidance for Determining Sediment Deposition Impacts to Aquatic Life in Streams and Rivers (June 1998) provides the primary direction for monitoring these M & E listed streams.

Evaluate disturbance level of watersheds by comparing current conditions with 1997 Watershed Health Assessment: No watersheds experienced disturbance conditions that had changed significantly from the 1997 Watershed Health Assessment. New disturbance activities occurred primarily in the North Fork of the Elk River watershed due to salvage operations of the Routt Divide Blowdown. These activities have not significantly affected conditions in the watershed, however.

Review projects for compliance with the effectiveness of Forest Plan water and riparian Standards and Guidelines: A team comprised of the District Ranger, a timber specialist, timber sale administrator, and hydrologist conducted a field review of the Holmes Timber Sale operations on the Laramie Ranger District. Although this review technically occurred on the Medicine Bow portion of the Forest, the standards and guidelines reviewed were consistent with those in the Routt Forest Plan. (Subsequent year's reviews need to focus wholly on Routt activities so we can better monitor the Routt Revised Plan.) This was done to evaluate compliance with the timber sale contract, and to determine how well the contract reflected the Environmental Assessment document. Field examination determined that: 1) the harvest operations were terminated during wet conditions in order to prevent damage to the roads and protect the soil and water resources; and 2) drainage features installed on closed skid trails and temporary roads were effective at dispersing water, thus reducing erosion and degradation of the soils and water.

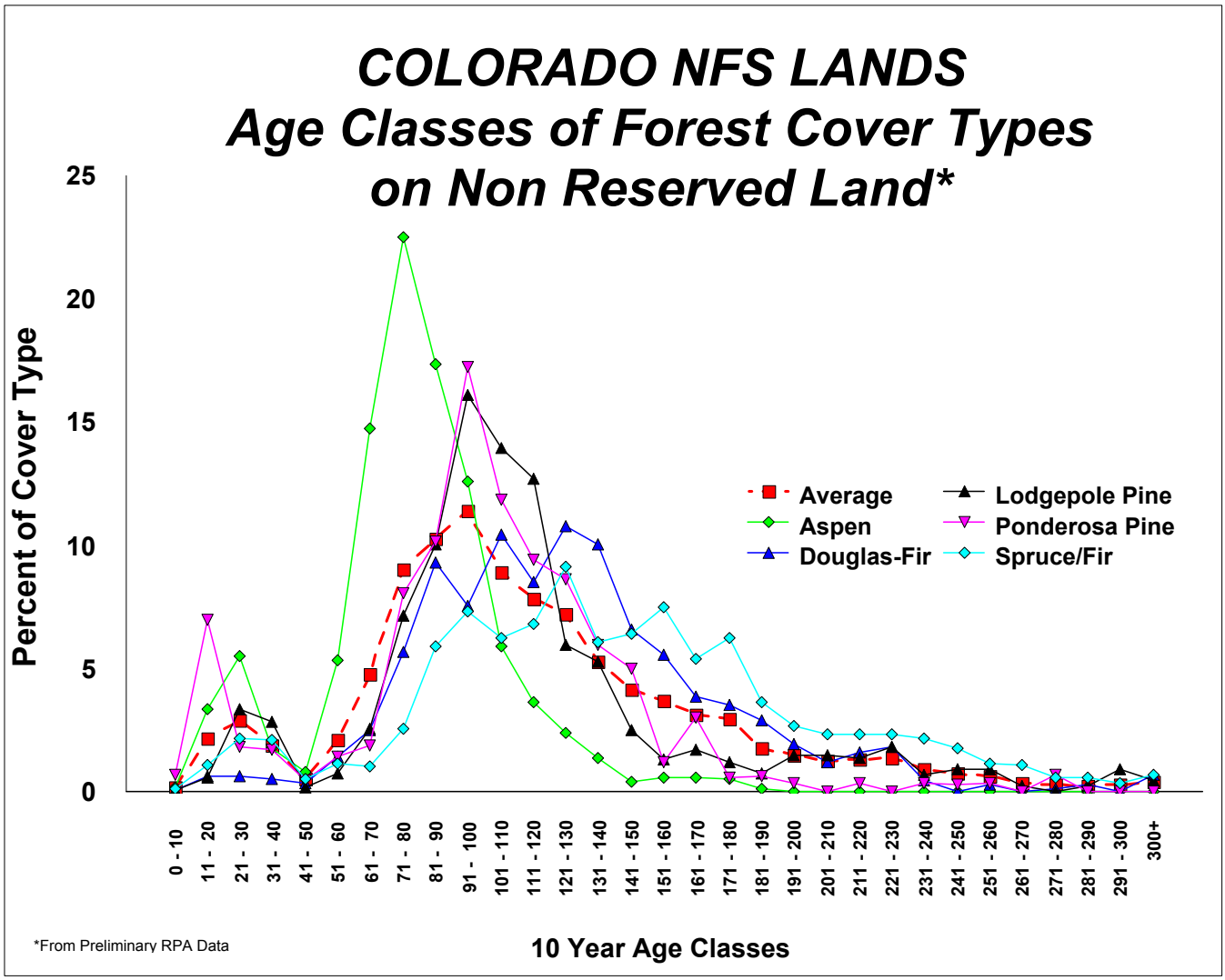
Conclusion: Monitoring completed during 2001 indicated that the watersheds are in a healthy condition, and that management activities have not caused further degradation of the soil and water resources. No change to the Forest Plan is required at this time.

No change indicated	X
Implementation change needed	
Change to Forest Plan needed	

Recommendations: Continue to monitor the effectiveness of the Watershed Conservation Practices Handbook (FSH 2509.25) and other Forest Plan Standards and Guidelines for protecting water quality and maintaining watershed health.

Monitoring Question 1-4 - Are insect and disease populations compatible with attainment of management area goals and objectives?

The results of the 2001 aerial surveys to detect insect and disease damage and mortality reflect stand conditions of an aging forest that is becoming more susceptible to disturbances, such as windthrow, insects, and disease. The graph below displays the age structure of timber stands in Colorado.



The age-class graph was created more than ten years ago, so the current age classes are generally about ten years older than what is displayed. As the graph shows, the majority of stands within National Forests in Colorado, which includes the Routt National Forest, are increasing in age and becoming more susceptible to damaging agents such as insects, disease, windthrow, wildfire, etc. It is anticipated that there will be an increase in both the incidence and severity of these types of disturbance events as the stands continue to mature.

Spruce Bark Beetle:

As discussed in previous monitoring reports, following the Routt Divide Blowdown (October 1997), the spruce bark beetle (*Dendroctonus rufipennis*) became the agent with the greatest potential to cause widespread tree mortality on the Forest in the near future. This wind event resulted in abundant spruce beetle breeding habitat throughout the spruce-fir forest vegetation type on the Hahns Peak/Bears Ears Ranger District. Surveys and monitoring of bark beetle activity has occurred each year since the blowdown occurred, and have included techniques such as aerial survey, pheromone trapping, extent surveys, brood sampling, and general reconnaissance.

During 2000 and 2001, spruce beetle populations moved from the blowdown area into standing green trees. This has resulted in significantly higher levels of spruce mortality than what was observed during 1994. These spruce beetle outbreaks in standing trees are numerous and have been detected in many areas on the Hahns Peak/Bears Ears Ranger District and in several areas on the Parks Ranger District. Outbreaks range in size from small groups of infected trees within a stand, to entire stands containing thousands or possibly tens of thousands of infested trees.

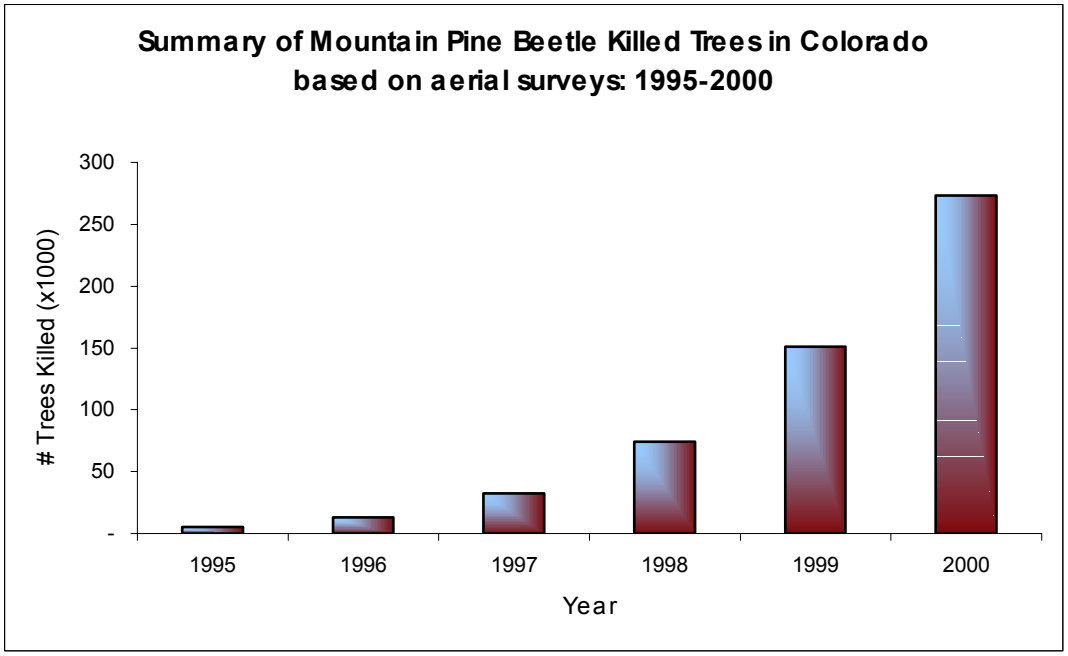
A large-scale spruce beetle outbreak is in progress because two necessary factors have been met; susceptible forest conditions, and a large population of spruce beetles. Apparently, the Routt Divide Blowdown was the triggering event that caused spruce beetle populations to increase and take advantage of the susceptible conditions. The amount of windthrow and the presence of diseased and damaged trees has provided additional host material for spruce beetle populations to keep increasing.

Based on current knowledge, the scale of the spruce beetle outbreak could affect one or more mountain ranges and result in widespread and intense tree mortality and other associated impacts. Large spruce beetle outbreaks are ongoing in Utah and Wyoming, and spruce beetle populations are increasing in many areas on the central and southern west slopes of Colorado. Vast portions of the central Rocky Mountains are characterized by forest conditions that are susceptible to spruce beetle outbreaks.

Management efforts can locally mitigate beetle impacts to varying degrees, but stopping landscape-level epidemics is almost impossible once they have begun. Small outbreaks can be controlled if proper suppression and prevention activities are initiated before the epidemics reach multi-stand proportions.

Mountain pine beetle:

Another significant insect pest is the mountain pine beetle (*Dendroctonus ponderosae*) in lodgepole pine, ponderosa pine, and limber pine. The following chart depicts the annual two-fold or greater increase in mountain pine beetle mortality that has been occurring in Colorado since the mid 1990's.



In Colorado, the pine beetle has killed more than 275,000 trees covering approximately 140,000 acres during 2000. Although not displayed in this graph, the 2001 aerial survey indicated that the number of trees killed by mountain pine beetle again doubled from the previous year. The largest mountain pine beetle outbreak on the Routt National Forest is in Grand and Jackson County, especially in the east Troublesome, Green Ridge, and Owl Mountain areas. The Parks Ranger District filed a Notice of Intent to conduct an analysis and Environmental Impact Statement for prevention, suppression, and salvage operations in the Green Ridge and Owl Mountain areas. The EIS is scheduled for completion during October 2002, and the management actions could be implemented during the following year.

Another mountain pine beetle outbreak of concern is within the Steamboat Ski Area. In cooperation with the Steamboat Ski Corporation, suppression actions have been applied to this outbreak for the past three years, but the number of trees killed by mountain pine beetles continues to increase. Preventive thinning treatments in some dense lodgepole stands within the Ski Area, as well as continued suppression efforts and preventive spraying of individual high value trees was analyzed in the Bark Beetle EIS

Subalpine fir decline:

The most widespread damage detected again during 2001 in Colorado was the continued decline of subalpine fir. This decline is poorly understood, but it is thought that a combination of insects (the Western balsam bark beetle, *Dryocoetes confusus*) and disease (*Armillaria spp*. or other root diseases) play a role in tree mortality. When subalpine fir dies it retains the red needles longer than most other conifer species, so it is possible that these totals may be cumulative from the last 2 to 4 years. This decline, which is present throughout the western United States and Canada, is most concentrated in the northern half of Colorado. Since little is known about this decline, it is not possible to determine how much of the damage occurred during the past year.

Conclusion - Stands of trees on the Routt National Forest are aging to the point that they are becoming increasingly susceptible to disturbances such as windthrow, insects, and diseases.

Spruce Beetle - The Routt Divide Blowdown has created optimal conditions for a spruce beetle epidemic on the Forest. The current beetle populations are increasing in size and intensity faster than what was predicted three years ago. There is little doubt now that this epidemic will enlarge and could affect the spruce fir timber type on one or more mountain ranges in northwest Colorado and southern Wyoming.

This situation would likely be incompatible with some of the Forest goals and objectives.

Subalpine Fir Decline - While subalpine fir is being impacted more than other species, little is known about the complex interaction of insects and disease that is causing the mortality. Improved monitoring protocols are needed to assist measuring annual mortality and to enable the identification of the potential agents. There is also a need to perform research, in order to verify the causes and to identify effective management techniques to counter the effects of those agents.

Mountain Pine Beetle - Damage to the pine forests in Colorado, including those on the Routt NF, has been rapidly accelerating since 1994 due to this pest. There are large epidemics presently occurring on the Forest in the east Troublesome, Green Ridge, and Owl Mountain areas. Other infestations on the Routt NF, such as the Steamboat Ski area, are less severe but are expected to increase in both size and intensity. The current rate of growth reflects susceptible stand conditions and the need to implement appropriate management strategies.

No change indicated	X
Implementation change needed	
Change to Forest Plan needed	

Recommendations - Continue intensive and extensive monitoring of spruce bark beetle and mountain pine beetle populations. Consider the continued use of the "rapid assessment" techniques used by the Routt in the past. Implement the decisions of the Bark Beetle EIS. Continue to coordinate with Forest Service Research to promote research related to the subalpine fir decline, and also to test methods for limiting spruce beetle populations and reduce the risk of beetle epidemics in spruce stands. When the extent of the beetle epidemics on the Parks Ranger District is better known, a major Forest Plan amendment might be required because the Forest Goals and Objectives may no longer be compatible. Consider the use of an interdisciplinary team to determine when or under what conditions we need to initiate a forest plan amendment. Continue monitoring forest vegetation management practices regarding the relationship between dwarf mistletoe and clearcut unit size, in order to determine the need to modify timber sale unit designs.

Monitoring Question 1-5: How is harvest unit size affecting landscape patterns across the Forest? (Coarse Filter Scale)

Formal evaluation for this monitoring question will not occur until fiscal year 2003. Information for FY 2001, however, is being included here to ensure that it is available for future evaluation. Although no formal analysis will be done until 2003, the ID Team identified some trends worth noting at this time.

A copy of the Forest's vegetation data (RIS and GIS data attributes) has been archived as of January 2000. This data will serve as a baseline for the initial comparisons that will be made in the 2003 Annual Monitoring Evaluation Report.

Data showing the average and maximum size of clearcut units that were harvested during FY 2001 by Ranger District are presented in the following table:

This information will be included in the baseline data for use in the 2003 analysis. The large openings caused by the Routt Divide blowdown are not I

Ranger District	Number of Clearcut Units	Average Clearcut Size (acres)	Maximum Clearcut Size (acres)
01 Yampa	14	10	22
03 Hahns Peak/Bears Ears	0	0	0
04 Parks	1	22	22

Observation: No clearcut units that were harvested during 2001 exceeded 40 acres. The largest unit size that was treated was 22 acres, while the average sized unit was 11 acres.

Monitoring Question 1-6: Are habitats for threatened, endangered and Forest Service Rocky Mountain Region sensitive species on the Routt National Forest being maintained or enhanced? (Fine Filter Scale)

During fiscal year 2001, the Hahns Peak/Bears Ears District terrestrial wildlife biologists monitored for the presence/absence of the northern goshawk and the boreal owl. In addition, biologists monitored 2,320 acres for boreal owls by calling to the birds and listening for responses. Five boreal owls were identified as a result of this effort. Biologists also used a similar method to monitor for the presence/absence of the northern goshawk. Biologists monitored 8,125 acres by calling to goshawks and listening for responses. Finally, District biologists monitored 4,800 acres for the presence/ absence of snowshoe hares using the Krebbs pellet-count technique.

No monitoring reports were available from the other two Routt Ranger Districts because of the turnover of wildlife biologist personnel. No change to the Forest Plan is needed in relation to this item.

No change indicated	X
Implementation change needed	
Change to Forest Plan needed	

Monitoring Question 1-7: Are forest cover types and habitat structural stages (coarse filter as described in the FEIS on pages 3-107 through 3-110) being provided for across the Forest?

Formal evaluation for this monitoring question will not occur until Fiscal Year 2003. A copy of the Forest's vegetation data (RIS and GIS data attributes) was archived each year during January, 1998 to 2001. This data will serve as a baseline, and will also be used for making comparisons in the 2003 Annual Monitoring Evaluation Report. The forest may pursue collecting this information using cooperative agreements with other organizations. One method for obtaining cover type and habitat structural stage information is to re-measure timber inventory plots, however, this method is expensive. Cover types and habitat structural stages change very slowly over time, making remote sensing an alternative method of viable, cost-effective monitoring. No change to the Forest Plan is needed.

No change indicated	X
Implementation change needed	
Change to Forest Plan needed	

Monitoring Question 1-8: How are management activities affecting late successional forest structure in management Areas 5.11 and 5.13?

Formal evaluation for this monitoring question will not occur until Fiscal Year 2003. A copy of the Forest's vegetation data (RIS and GIS data attributes) was archived each year during January, 1998 to 2001. This data will serve as a baseline and also to make comparisons in the 2003 Monitoring Report. No change to the Forest Plan is currently needed.

No change indicated	X
Implementation change needed	
Change to Forest Plan needed	

Monitoring Question 1-9: How are management activities affecting riparian habitats (including wetlands) on the Forest?

Formal evaluation of this monitoring question will not occur until Fiscal Year 2003. However, information for 1999 to 2001 has been archived to ensure that it is available for future evaluation. Although no formal conclusions will be reached until 2003, the ID Team determined that the data gathered during FY 2001 was worth documenting for future consideration.

As described in Monitoring Question 1-3, a major restoration project at the Newcomb Creek stream crossing was completed during 2001. Not only did this project help to restore the natural stream dynamics, but it also created a backwater wetland/riparian area at the site. Restoring the natural stream characteristics also helped to restore the floodplain, which will result in improving the riparian condition.

Conclusion: Riparian conditions will continue to be monitored using riparian surveys in conjunction with stream surveys. Watershed improvement projects often help to restore not only watershed function and stream dynamics, but also riparian and wetland habitat. No change to the Forest Plan is needed.

No change indicated	
Implementation change needed	X
Change to Forest Plan needed	

Recommendation: Continue to monitor riparian conditions in association with stream function and soil health, as described in Monitoring Question 1-3. Where surveys indicate the presence of degraded riparian, stream, or soil conditions, a management plan to restore these areas needs to be developed.

Monitoring Question 1-10: Are stands adequately stocked within 5 years of final harvest?

The Forest compiles the Reforestation and Timber Stand Improvement Accomplishment Report annually. Part of the report identified all the sites that received a final timber harvest during 1996. The regeneration surveys showed that of the 633 acres that were final harvested on the Forest, 221 acres were not certified as being adequately stocked. Of those 221 acres that could not be certified, 113 acres were in clearcuts that nearly met the stocking standard. These stands had poor cone serotiny and low seed viability due to dwarf mistletoe, but are expected to fill in naturally. These clearcut acres are scheduled for additional regeneration surveys and if they still do not meet the stocking standard, fill-in planting will be scheduled.

Approximately 108 acres were in group selection units that also were close to the requirements of being certified as stocked. Winter logging probably did not provide enough ground scarification. Additional

regeneration surveys are scheduled and the District expects these sites to fill in naturally without additional regeneration treatments. If they do not meet the standard, fill-in planting will be scheduled.

A review of the reforestation records revealed that some of the natural reforestation problems are related to winter logging in areas where competition from elk sedge vegetation is severe. Summer harvest operations ordinarily scarify the sites, which provides numerous areas of exposed mineral soil among the sedge where seedlings can become established. The lack of scarification due to winter logging may not provide adequate site preparation so that natural regeneration can be successful.

Where winter logging is scheduled as part of timber sales in the future, the Forest will determine where additional scarification is necessary to ensure adequate natural regeneration. Success of this approach will be monitored and reported in subsequent monitoring reports, and will be based on the following contract provision *C(T) 6.42 Skidding and Yarding (Special Objectives) 11/98:*

"On cutting units _____ which contain approximately _____ acres and as shown on the Sale Area Map, unless otherwise agreed in writing, a minimum of 50 percent and a maximum of 70 percent of the workable ground surface uniformly distributed over the unit area, shall be scarified down to bare mineral soil. Scarified ground is here defined as bare mineral soil in patches exceeding .25 feet by .25 feet". If the purchaser elects to work out side of the normal operation season in the winter, then the purchaser will be required to return to the unit the next summer to complete the scarification requirement. This scarification requirement will not conflict with the slash requirements of C(T) 6.43# - Felling Restrictions In Serotinous Lodgepole Pine Units (11/98) when included with lodgepole clearcut units.

Dwarf mistletoe is a parasitic plant that grows into the bark of host trees, feeding off the food and nutrients that the tree produces. Damage by dwarf mistletoe includes reduced growth, lower timber quality, increased mortality, storm damage, reduced seed production, and increased susceptibility to other insects and diseases. The amount of viable lodgepole pine seed in dwarf mistletoe infected stands might be less than originally believed. Fill-in planting should be considered and planned for heavily infected lodgepole pine stands.

Conclusion – The Forest reforestation records currently indicate that 221 acres harvested during 1996 are not certified in the database as being stocked. Corrective actions will be implemented in these areas.

No change indicated	
Implementation change needed	X
Change to Forest Plan needed	

Recommendation – Continue monitoring to ensure that regeneration meets the five-year requirement and that the records are updated on a regular schedule to allow verification as part of the annual monitoring report. As projects, site conditions, and weather permits, monitor the success of tree regeneration in areas of elk sedge and grass, and also at rocky sites.

Monitoring Question 1-11: Has timber suitability classification changed on any lands?

Formal evaluation for this monitoring question will not occur until the fiscal year 2008. A copy of the Forest's timber suitability database was archived as of January 2001. This data will serve as a baseline for comparisons that will be made in the 2008 Annual Monitoring Evaluation Report.

No change indicated	X
Implementation change needed	
Change to Forest Plan needed	

Monitoring Question 1-12: What is the relationship between changes in habitat and population trends of the management indicator species?

Formal evaluation for this monitoring question will not occur until Fiscal Year 2003. A copy of the Forest's vegetation data (RIS and GIS data attributes) has been archived as of January 1998. This data will serve as a baseline for initial comparisons that will be made in the 2003 Monitoring Report.

In Fiscal Year 2001, the Hahns Peak/Bears Ears District implemented two habitat improvement projects for Management Indicator Species. Soil habitat improvements were conducted on 810 acres for sharp-tail grouse, while 415 acres of seeding was also done to improve habitats and monitor for grouse. The other project involved constructing a livestock exclosure of 208 acres to protect and monitor boreal toads. Boreal toads are not listed as MIS in the revised Routt Forest Plan (EIS, page 3-125), but they are included on the Regional sensitive species list.
No reports were received from the either the Yampa or the Parks Ranger Districts due to turnover in District wildlife personnel. No change to the Forest Plan is necessary.

No change indicated	X
Implementation change needed	
Change to Forest Plan needed	

Monitoring Question 2-1: Do recreational opportunities respond to Forest users desires, needs, and expectations?

Formal evaluation for this monitoring question will not occur until fiscal year 2003. However, 1999 to 2001 information has being collected to ensure that it is available for future evaluation. The table below shows the results of public scoping from projects selected for sampling during 2001. The comments derive from formal "comment cards" available at front desks and at interpretive sites, which invite written public input on any subject of interest to them. The comments concerning Trail 1135 (the Arapaho Ridge Trail) were generally strongly stated. Positive comments generally dealt with the perceived need to lessen the physical impacts of motorized use from the trail, or expressed positive feelings about the trailhead improvements that were part of the project. Negative comments generally expressed dismay at the loss of motorized recreation opportunities. No change to the Forest Plan is needed.

Developed Facilities Record Fiscal Year 2001			
Comment Cards Received:			
Project Type	***No. of Comments***	***Positive comments***	***Negative comments***
Rec – Trail 1135	619	~ 250	~ 369
Watershed/Rec Newcomb Ck	3	2	1
Rec – Winter Parking Lots	4	4	0
Winter Parking Lots	164	163	1

No change indicated	N/A
Implementation change needed	
Change to Forest Plan needed	

Monitoring Question 2-2: Does the Forest infrastructure (travelways, roads, trails) facilitate attainment of desired recreational experiences, including access for a wide range of abilities?

Formal evaluation for this monitoring question will not occur until Fiscal Year 2003. Monitoring Question 2-1 is also relevant to this question. The following table summarizes the Forest inventory of accessible facilities as of January 2001. This inventory will be used to complete the evaluation scheduled for 2003.

Accessible Facility Type	Year 1 (1998)	Year 2 (1999)	Year 3 (2000)	Year 4 (2001)	Total
Developed Campsites	11 + 5 toilet	2 +1 toilet	0	2	15 toilets + 8 trails
Developed Picnic sites	5 sites + 3 toilets	1 site + trail	2 sites	1 group site	9 sites and 3 toilets
Granger-Thye Rentals	0	0	0	0	0
Trailheads (including toilets)	2 + 2 Toilets	4 Toilets	0	1	3 + 6 Toilets
Trails (access)	0	0	4	2	6
Administrative Offices	3	0	0	0	3
Special Uses:					
Outfitter Guides	2	0	1	0	3
Resorts	1	0	0	0	1
Recreation Events	0	0	0	0	0
Organization Camp	0	0	0	0	0
Field Offices	1	2	0	0	3
Programs	1	0	0	0	1
Pier (Bear Lake)	1	Access trail	0	0	1 = access trail

No change to the Forest Plan is necessary at this time.

No change indicated	X
Implementation change needed	
Change to Forest Plan needed	

Monitoring Question 2-3: How are recreational activities affecting the physical and biological resources of the Routt National Forest?

An analysis of alternatives to managing public use of the Arapaho Ridge Trail (Trail #1135) was completed in 2001. This trail, follows Arapaho Ridge and the Continental Divide about 20 miles north of Kremmling, Colorado. Most of the trail lays within a 1.32 prescription area, managed principally for non-motorized use. Historic motorized use of this trail had raised comments and questions about undue damage to Forest resources. In a Decision Notice dated October 1, 2001, District Ranger Chuck Oliver called for this trail to managed for non-motorized use.

No change indicated	X
Implementation change needed	
Change to Forest Plan needed	

Recommendations: Continue to review recreation facilities and activities for the need to reduce effects to other resources. This pertains especially to resource conditions on and around the Arapaho Ridge Trail. This item needs to be reported for FY 2002. No change to the Forest Plan is needed.

Monitoring Question 2-4: How are selected projects and programs affecting visual quality?

During 2001, vegetation treatment, slash disposal, and tree planting were completed at the Big Creek Lakes Campground on the Parks District. The campground is located in Management Area 4.3 with an emphasis on dispersed recreation opportunities. The adopted visual quality objective is partial retention.

Lodgepole pine trees that were infested with dwarf mistletoe, or were dead or dying were removed as part of the Big Creek Lakes Vegetation Management Project. These trees were removed in order to reduce the spread of dwarf mistletoe disease to healthy trees, and also to protect campers from hazardous trees.

Following treatment, the appearance and landscape character of the northwest campground loops and the day-use area became more open, with some residual live standing mature trees . Removing heavy slash, planting spruce tree seedlings, and transplanting small lodgepole pine trees were accomplished during spring 2001 to improve and enhance the visual landscape of Big Creek Lakes Campground.

The treated sites do not meet the adopted visual quality objective of partial retention due to the treated sites dominating the landscape character of the foreground area within the campground. The treated sites presently meet the modification VQO. Over time, when the new trees reach a height of 6 – 8 feet, the area will meet the partial retention VQO.

Conclusion – Evaluation of this project determined that it does not meet the assigned visual quality objective. The slash clean up and tree planting, however, will help the project to move toward meeting the visual quality objective of partial retention and the desired condition for the area in a shorter period of time. No change to the Forest Plan is necessary at this time.

No change indicated	X
Implementation change needed	
Change to Forest Plan needed	

Monitoring Question 2-5: How are partnerships contributing to maintaining or enhancing recreation resource opportunities?

Methodology: Review and evaluate partnerships, MOUs, and Special Uses for Fiscal Year 2001.

Program	*RVDs or Participants*	*Dollars Collected*
Recreation Special Uses	***Total***	***Total***
Concessionaire	None	None
Organization Camp	2,000	80
Recreation Residences	25,405	15,915
Isolated Cabins	None	None
Resorts	None	None
Recreation Events	2,030	390
Outfitter and Guides	42,744 Service Days	114,866
Winter Resorts (Ski Areas)	1,069,047	700,000
Motion Picture/Television Location	None	None
Partnerships (Successful)	2 partnerships	52,000
Volunteers	1,657	Value: 146,730

Conclusion: There is a need to develop and implement a system that is stable and provides meaningful ways to measure and report partnership accomplishments. This will be coordinated between the Ranger Districts and the Forest Recreation Staff Specialist. No change to the Forest Plan is needed at this time.

No change indicated	
Implementation change needed	X
Change to Forest Plan needed	

Monitoring Question 2-6: Does the Forest provide interpretive experiences that describe ecosystem functions and the Forest Service mission?

More than 25,000 forest visitors were directly contacted using personal interpretation and environmental education programs on the Routt National Forest during 2001. A large number of these contacts were by direct communication related to the beetle epidemic, fuel reduction projects, and the role of natural disturbances in a forest environment.

More than 20,000 Forest visitors were contacted using other interpretive programs, such as campfire programs, nature hikes, historical walks, and archaeology presentations. Forest Service information was also presented to visitors using various brochures, maps, trailhead signs, wayside exhibits, special events, table-top displays, Smokey Bear programs, Woodsy Owl programs, and school presentations.

Routt National Forest employees participated in county fairs, parades and other special events and celebrations. Parade entries and booths focused on fire, trees/wildflowers, wilderness ethics, recreation, and natural disturbances. The Routt National Forest is a leading member of Partners in Interpretation. This partnership focuses on interpreting the natural and cultural resources of northwest Colorado. Interpretive programs were presented in cooperation with the following agencies and organizations:

- The Routt National Forest.
- Colorado State Parks.
- The City of Steamboat Springs.
- The Tread of Pioneers Museum.
- The Steamboat Ski Area.
- The Colorado Division of Wildlife.
- Yampatika.
- Steamboat Springs Chamber Resort.
- Bureau of Land Management.
- Nature Conservancy.

Conclusion: The Routt National Forest is providing interpretive experiences and focusing on opportunities that assist in communicating ecosystem functions to the public. No change to the Forest Plan is needed at this time.

No change indicated	X
Implementation change needed	
Change to Forest Plan needed	

Recommendations: Continue programs and partnership with other organizations. Focus on interpreting the Forest Service multiple-use mission and increase the number of programs available on the Forest.

Monitoring Question 3-1: Are outputs of goods and services being produced at a rate consistent with the projections in Table S-2 of the FEIS?

Formal evaluation for this monitoring question will not occur until Fiscal Year 2003. The Forest will compare actual accomplishments with the projections that were made in the revised Forest Plan.

The following table was derived from the Routt Forest Plan EIS (1997 Revision, Chapter S). It has been modified and annotated to display a comparison between outputs projected by the Forest Plan and what was actually accomplished during Fiscal Years 1998 - 2001.

The Forest Plan presents projected outputs for the anticipated ten-year planning period rather than on an annual basis. The projected outputs are neither minimum nor maximum targets. The data has been converted to an annual basis to facilitate annual comparisons of outputs for monitoring purposes. These data will fluctuate annually as the Forest budget fluctuates in response to annual constraints imposed by Congress and the Administration. The Forest will review outputs at year five (2003) to compare actual accomplishment to Forest Plan projections.

Resource Program Activity/Outcome	Units	Forest Plan Desired Condition Level	Forest Plan Experienced Budget Level	FY 1998 Level	FY 1999 Level	FY 2000 Level	FY 2001 Level
RECREATION							
Developed Capacity Available (1)	PAOT-days	1,541	1,452	1,520	1,520	1,520	1,603
Trails Available to Standard (2)	Miles	601	538	590	555	555	298
Trails Available-Total	Miles	820	810	852	829	940	1068
Developed Use	M Visits (3)	616	616	530	NR	NR	NR(8)
Dispersed Use	M Visits	877	877	938	NR	NR	NR(8)
WILDERNESS							
Wilderness Use	M Visits	98	98	110	NR	NR	NR(8)
HERITAGE RES.							
Inventory Area	Acres/yr	6,348	6,532	1,375	5,703	7,936	2,000
WILDLIFE - TES							
Inventory	Acres/yr	8	5	679	-0-	-0-	10,445
Monitoring Projects	Projects	2	1	0	2	4	5
Project Coordination	Acres	17,100	13,300	0	84,742	27,200	1,225
GRAZING							
Grazing - Sheep	Hd Mnth (4)	174,400	137,300	150,700	149,168	152,138	142,804
Grazing - Cattle	Hd Month	39,600	31,200	34,700	36,732	31,973	29,489
RANGE VEG.							
Noxious Weeds	Ac Treat	385	303	1,871	1,871	1,145	992
Rangeland Vegetation Inventory	Acres/yr	37,338	34,317	-0-	-0-	0	0

Resource Program Activity/Outcome	Units	Forest Plan Desired Condition Level	Forest Plan Experienced Budget Level	FY 1998 Level	FY 1999 Level	FY 2000 Level	FY 2001 Level
FOREST VEG.							
Volume Offered Chargeable Conifer (ASQ) (5)	MCF/yr (6) MBF/yr	3,200 14,800	N/A N/A	1,102 5,097	1,999 9,245	1,392 6,842	0 0
Volume Offered Chargeable Aspen (ASQ)	MCF/yr MBF/yr	1,200 2,000	N/A N/A	7.0 32.0	0 0	246 1,220	0 0
Volume Offered - Total Sale Program (All wood products)	MCF/yr MBF/yr	5,200 24,050	3,600 16,650	1,901 8,792	2,131 9,856	2,071 10,367	92.8 569.5
Harvest - Even age regeneration cut	Acres/yr	1,211	790	1,212	303	335	739
Harvest - Even age non-regeneration cut	Acres/yr	245	169	53	16	0	303
Harvest - Uneven age	Acres/yr	235	167	128	109	138	207
Reforestation	Acres/yr	1,211	790	1,014	934	1,002	826
Timber Stand Improvement	Acres/yr	1,027	1,019	1,823	1,086	461	111
Forestland Vegetation Inventory	Acres/yr	107,856	28,235	40,486	13,124	9,955	13,272
SOIL, AIR, WATER							
Soil and Water Resource Improvements	Acres/yr	143	133	40	18	28	200
Watershed Condition - Class I Watersheds	Wtrshds	85	85	55	55	55	55

Resource Program Activity/Outcome	Units	Forest Plan Desired Condition Level	Forest Plan Experienced Budget Level	FY 1998 Level	FY 1999 Level	FY 2000 Level	FY 2001 Level
Watershed Condition - Class II Watersheds	Wtrshds	49	49	73	73	73	73
Watershed Condition - Class III Watersheds	Wtrshds	0	0	0	0	0	0
Water Yield from timber harvest	Ac Ft/Year	715	490	719	719	234	490
FIRE							
Fuel Treatment	Acres	1,682	1,609	2,338	786	296	263
ROADS							
Roads Maintained /7	Miles	1,500	1,448	500	500	617	1,170
Road Construction	Miles/yr	16.2	9.3	5.9	0.1	2.3	1.5
Road Reconstruction	Miles/yr	9.8	5.2	11.5	0.0	1.8	2.4
Road Obliteration	Miles/yr	18.4	18.4	0.0	20.0	10.0	1.0
TRAILS							
Trail Construction/ Reconstruction	Miles/yr	6	1	13.6	20.8	14.6	36.2

(1) Recreation Developed Capacity Available has changed due to implementation of the new INFRA structure database, which automatically calculates capacity of developed sites depending upon opening and closing dates. This figure will probably fluctuate annually, depending upon different conditions that may affect these dates.

(2) Trails Available to Standard have increased more than anticipated due to changes in program emphases on the Districts, state funding availability, and an identified need.

(3) M Visits = 1,000 visits

(4) Hd Mnth = head month; calculated by multiplying the number of animals by the period of occupancy.

(5) ASQ = Allowable Sale Quantity.

(6) MCF/yr = thousand cubic feet per year.

(7) The Forest road system consists of approximately 1,500 miles. About one third, or 500 miles, are maintained each year on a rotational cycle.

(8) Inventory efforts were totally applied to the National Visitor Use Survey, the statistical results of which are not presently available.

NR = Not Reported.

No change indicated	X
Implementation change needed	
Change to Forest Plan needed	

Monitoring Question 3-2: Are costs of implementing programs occurring as predicted in the Table S-3 of the FEIS?

Formal evaluation of this Monitoring Question will not occur until Fiscal Year 2003. Information for this item was derived from Table S-3 in the Forest Plan Final EIS, which compares two different budget levels. The Desired Condition budget level is relatively unconstrained and reflects the goal of full Plan implementation. The Experienced Budget level reflects the amount of actual funds allocated to the Forest during fiscal years 1992, 1993, and 1994, with 1994 being displayed as the Base Year. The actual Forest budget will fluctuate annually according to Congressional allocations. No change to the Forest Plan is currently needed.

No change indicated	X
Implementation change needed	
Change to Forest Plan needed	

Monitoring Question 3-3: How are Forest management activities affecting local employment and income?

Formal evaluation of this Monitoring Question will not occur until Fiscal Year 2003. Forest recreation personnel are in the process of developing a methodology to address this question. In addition, the Forest Service is currently developing a standardized approach for collecting recreation use information. The Forest has been validating and analyzing data that has been collected since the Forest Plan was approved during 1997. The data collected during previous years will be used to evaluate this Monitoring Question during 2003. No change to the Forest Plan is needed at this time.

No change indicated	X
Implementation change needed	
Change to Forest Plan needed	

Monitoring Question 3-4: How well is the forest interacting and planning in cooperation with communities?

The Bark Beetle Information Task Force was formed during the Spring of 1999 to provide information and education for residents of Routt County. The primary focus of the Task Force is related to potential beetle epidemics, planned fuel reduction projects, and wildfires. This community-based group is comprised of members from the Medicine Bow-Routt National Forests, Colorado State University Cooperative Extension, City of Steamboat Springs, Routt County, Steamboat Ski and Resort Corporation, the Steamboat Chamber Resort Association, and private citizens. The objective of the group is to help residents of Routt County and surrounding areas understand the potential environmental impacts of a beetle epidemic, the importance of reducing forest fuels, and the overall role of fire in the ecosystem.

The Forest is also an active partner with the Routt County Wildland Fire Council. The group focuses on fire planning and wildland fire awareness. The Forest is also involved with the Routt Winter Task Force, which is a community organization working to address increasing conflicts between various winter uses in the backcountry. Forest Service specialists continue to give presentations about a variety of forest subjects to civic groups, homeowner associations, and schools.

Conclusion: During Fiscal Year 2001 the Forest actively interacted with neighboring communities and organizations by providing a wide variety of information related to forest planning and project implementation. No change to the Forest Plan is needed.

No change indicated	X
Implementation change needed	
Change to Forest Plan needed	

Recommendation: The Forest needs to continue involving the public, and specifically coordinating and interacting with adjacent communities and organizations.

Monitoring Question 4-1: Are there changes that have resulted in unforeseen issues that require Forest Plan amendment?

Formal evaluation of this Monitoring Question will not occur until Fiscal Year 2003. Data for 2001, however, is being considered to ensure its availability for future evaluation.

In the Fiscal Year 1999 monitoring report it was stated that listing of the Canada lynx as threatened will likely result in a Forest Plan amendment. Most current direction (as of March 2001) states that the Rocky Mountain Region is amending Forest Plans in the Southern Rocky Mountain province of the Canada lynx that will consider the Canada Lynx Conservation Assessment and Strategy. A draft EIS is expected to be released during 2002.

President Clinton initiated the Roadless Conservation Initiative during October 1999. An FEIS was prepared and released in December 2000. A final rule was published in the Federal Register on January 12, 2001. The final rule prohibits road construction, reconstruction, and timber harvest in IRAs (Inventoried Roadless Areas) because of the likelihood of altering and fragmenting landscapes, resulting in immediate, long-term loss of roadless area values and characteristics. Another Administrative Order subsequently suspended implementation of this order.

On May 4, 2001, the Secretary of Agriculture announced a reexamination of the Roadless Area Conservation Rule, with a public comment period that closed on September 10, 2001. The Forest Service issued two Interim Directives on July 27, 2001, reserving to the Chief of the Forest Service, with some exceptions, authority to approve timber harvest and road construction and reconstruction in roadless areas. Depending on the outcome of the reexamination of the Roadless Rule and pending litigation, there may be a future need to amend the Forest Plan to change Management Area Prescriptions.

One Forest Plan amendment was processed during fiscal year 2001. Amendment number 2 was released on April 10, and involved minor changes to the mapped Management Area Prescriptions in the Mt. Zirkel Wilderness to facilitate relocation of a portion of the Luna Lake Trail. The relocation of this trail was made necessary by impacts of the 1997 blowdown. The records documenting this Amendment are on file at the Supervisor's Office in Laramie, Wyoming.

No change indicated	X
Implementation change needed	
Change to Forest Plan needed	

Monitoring Question 4-2: Are the standards and guidelines prescribed in the plan being incorporated in NEPA documents and implemented on the ground?

During 2001, the Forest Plan ID Team again reviewed several projects related to the Routt Divide Blowdown and also some fuels reduction activities. The ID Team concluded that the standards and guidelines stated in the Plan are being appropriately incorporated into project planning and implementation. No necessary changes have been identified.

No change indicated	X
Implementation change needed	
Change to Forest Plan needed	

Monitoring Question 4-3 - Is the Forest moving closer to the desired condition identified in the Forest Plan at the Geographic Area and Management Area scale?

Formal evaluation of this Monitoring Question will not occur until Fiscal Year 2003. Forest vegetation data was extracted from the RIS and GIS databases during January, 2001, and was archived. This data will serve as a baseline for the comparative evaluations that will be made in the 2003 Monitoring Report. No change to the Forest Plan is necessary at this time.

No change indicated	X
Implementation change needed	
Change to Forest Plan needed	

LIST OF PREPARERS

The Annual Monitoring Evaluation Report for fiscal year 2001 was prepared by Steve Nielsen, NEPA/FOIA Specialist for the Medicine Bow-Routt National Forests and Thunder Basin National Grassland. The following list displays the name and resource program of the Forest Leadership Team, and also the Forest ID Team members that contributed the information and evaluation for the Monitoring Items.

SELECTED MEMBERS OF THE FOREST LEADERSHIP TEAM

NAME	FUNCTIONAL RESOURCE AREA
Mary H. Peterson	FOREST SUPERVISOR
Susan Kay	Director - Business Management Group
Lynn Jackson	Director - Planning, NEPA/FOIA/Appeals
Richard Rine	Director - Renewable Resources
Mike Murphy	Director - Program Support Group/Recreation

STAFF SPECIALISTS

NAME	FUNCTIONAL RESOURCE AREA

The ID Team was comprised of the following individuals:

Tommy John	Soil Scientist
Gary Roper	Forester/Silviculturist
Gregory Eaglin	Fisheries Biologist
Carol Tolbert	Data Coordinator RIS/GIS
Diann Pipher	Public Affairs
Liz Schnackenberg	Hydrologist
Scott Cowman	Hydrologist (Blowdown)
Kirk Wolff	Air Resource
Jeff Tupala	Landscape Architect
Mary Sanderson	Recreation
Bill Schaupp	Entomologist (Blowdown)

CERTIFICATION

I have reviewed the Annual Monitoring and Evaluation Report for the Routt National Forest that was prepared by the Forest Interdisciplinary Team for Fiscal Year 2001. I believe that the results of Monitoring and Evaluation, as documented in this Annual Report, meet the intent of both, Chapter IV of the Forest Plan, and appropriate Regulations (36 CFR 219.12(k); 1982 version).

The Forest ID Team and Leadership Team have not identified any significant changes in conditions or demands of the public that would change the goals, objectives, or outputs of the Forest Plan (36 CFR 219.10(g)). Therefore, I have determined that an Amendment to correct any identified deficiencies in the Plan is not needed at this time.

I have also considered the recommendations made by the ID Team regarding the proposed changes to the Monitoring procedures or implementation methods, as described in this report. I concur that the recommended changes are necessary to improve the effectiveness of the Forest Monitoring Program or implementation of resource projects on the ground. These changes will be made by Forest personnel, as funding allows, and will comply with the appropriate analysis and documentation procedures of all laws and regulations, including the NEPA.

I concur with the findings of the 2001 Annual Monitoring and Evaluation Report for the Routt National Forest. This is not an appealable decision, according to 36 CFR 215.7, "Decisions Subject to Appeal." Contact Steve Nielsen, NEPA/Monitoring/FOIA Specialist, at the Medicine Bow-Routt National Forests, 2468 Jackson Street, Laramie, Wyoming, 82070, or call (307) 745-2404, if you have any specific concerns, questions, or comments about this report.

s/ *MARY H. PETERSON* *SEPT. 23, 2002*

MARY H. PETERSON
Forest Supervisor

Date

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