

FY 2007 ANNUAL MONITORING AND EVALUATION REPORT

GRAND MESA, UNCOMPAHGRE, AND GUNNISON NATIONAL FORESTS

The *Land and Resource Management Plan* for the Grand Mesa, Uncompahgre, and Gunnison National Forests (the Forest Plan) was adopted in 1983, and underwent significant amendment in 1991. The statutory 15-year period for Forest Plan revision ended in September, 1998. In the intervening years, the resources and people of the western slope of Colorado have changed in important ways. Population growth, increases in recreation use, advances in scientific understanding of ecosystems, and new demands for natural resources, are only a few of the important changes and trends affecting the region. The Forest Plan needs to be revised to account for these changes and to reflect our improved understanding of forest plan utility and decisions.

The Forest planning team, as well as many other Forest employees, have been developing information and working with the public to move forward with Forest Plan revision. The comprehensive public involvement and collaborative process included several iterations of preliminary plan development, review and comment by the public. Many of the products from this work are available for review on the Forest internet site (http://www.fs.fed.us/r2/gmug/policy/plan_rev/index.shtml). The July 2006 version of the Proposed Plan was edited to demonstrate better compliance to the intent of the 2005 Energy Policy Act and conformance to the 2005 Planning Rule. An updated official version of the Proposed Plan was released on March 16, 2007, starting a formal 90-day public comment period. On March 30, 2007, a U.S. District Court in California ruled that the Forest Service's adoption of the 2005 Planning Rule—under which the GMUG proposed plan was prepared—violated three governing statutes. Consequently, the formal comment period on the GMUG Proposed Plan was suspended on May 7, 2007. The agency issued a draft revised planning rule and associated EIS on August 23, 2007. The public comment period closed on October 22. A final correct planning rule is expected in early 2008. At that time, I will decide how the Forest will proceed with its Plan revision effort.

While revision is needed to improve and update the existing Forest Plan, it is my finding that the current Plan's standards, guidelines, management prescriptions, and other direction are adequate strategic management guidance for the Grand Mesa, Uncompahgre, and Gunnison National Forests during the pendency of the Plan revision effort.

/s/ Charles S. Richmond
CHARLES S. RICHMOND
Forest Supervisor

2/14/08
DATE

INTRODUCTION

MONITORING ACTIVITIES

Monitoring closes the loop between planning and implementation. This report assesses how well we are implementing the Forest Plan, whether Forest Plan direction is effective at achieving management goals, whether implementation of the Forest Plan is achieving the predicted effects, and whether the assumptions made in developing the plan remain valid. Monitoring provides the foundation on which we will build the Forest Plan revision. Monitoring is not a special, one-time, activity or emphasis item. Rather, it is an integral part of every project and manifests itself most successfully in the day-to-day administration and documentation of each project.

Monitoring on this Forest consists of a range of activities. Plan objectives and standards are reviewed as part of NEPA analysis and decision-making. Ongoing projects are reviewed in the field in the context of this continuing awareness. Interaction with the public through contact in the field and in field offices, and through public comment also serves as effective feedback to staff.

The actual preparation of this report consisted of the compilation of respective staff observations for their areas of responsibility.

Monitoring results are reported under three headings: Implementation Monitoring, Effectiveness Monitoring, and Validation Monitoring. These categories and the questions asked and answered are taken directly from the GMUG Monitoring Plan (pages IV- I through IV- 16 of the Forest Plan).

A. Implementation Monitoring

Are projects being implemented in accordance with Forest Plan direction?

1. Outputs and Activities

Are outputs and activities shown in the Forest Plan being accomplished?

In addition to the standards, guidelines, and management prescriptions it establishes, the Forest Plan includes projections of certain outputs and activities as an indicator of the effects of management direction. These projections do not represent Forest Plan decisions or commitments; actual accomplishments reflect the annual appropriations available to the Forest to accomplish needed work. Accomplishments in 2007, as in prior years, were substantially below Forest Plan projections in many areas.

Table I was developed from annual Management Attainment Reports (MAR) for 1991-2000 and Table III- I of the Amended Forest Plan (pages 111-6 through III-8). Many of the outputs reported in MAR are not directly comparable with projections described in the Forest Plan. Table I displays those accomplishments which are comparable between the two.

Table I - Outputs of Goods and Services

Outputs & Services	Units	FY 2007 Accomplishments	FY 1991 - 2004 Avg Annual	Forest Plan Projection
Recreation				
Trail Construction & Reconstruction	Miles		24	50
Wilderness				
Wilderness Mgmt	M Acres	555	555	515
Lakes Restored	Acres			
Wildlife/Fish/TES				
Inland Lake Habitat Enhanced/Restored	Acres	6	10	
Inland Stream Habitat Enhanced/Restored	Miles	10	13	
Acres of Terrestrial Habitat Enhanced	Acres	2272	3417	2000
Non-Structural Wildlife Improvements	Acres	2272 (Non T&E) 250 (T&E)	3440	2,000
Range				
Grazing Use (Livestock)	MAUM	232.8	N/A	300
Non-Structural Improvements	Acres	1200	1365	2500
Timber				
Conifer Sawtimber	MMBF	3.6	4.5	21.0
Conifer POL	MMBF	0.6	0.6	2.4
Aspen POL	MMBF	4.4	5.4	15.0
Firewood & Other	MMBF	1.9	2.6	7.0
Total Offer	MMBF	10.5	12.2	45.4
Reforestation	Acres	1603	1487	870
Timber Stand Improvements	Acres	464	437	200
Minerals				
Leases and Permits	Number of leases, NEPA decisions issued, permits approved, operations administered to standard	177	N/A	189*
Locatable Minerals	Operating Plans		N/A	100
Protection				
Fuel Treatment	Acres		3,673	2,000
Lands				
Land Exchange	Acres	50	1,482	240
ROW Acquisitions	Cases	12	N/A	8
Landline Location	Miles	12	18	20
Soils				
Soil/Water Improvements	Acres	46	65	76

Facilities				
Road Construction & Reconstruction	Miles	26.6	11	61
Revenues				
Returns to Treasury	M	1608.6	N/A	
Costs				
Total Budget	M	18,193.9	N/A	

**Increase based on pending lease/license applications*

2. NEPA Compliance

Are NEPA documents in compliance with the Forest Plan? Are the projects being implemented in accordance with the documents?

As part of the Forest Checkpoint Review process (Forest Service Handbook Supplement No. GMUG 1909.15-2005-1, which can be seen at <http://fsweb.gmug.r2.fs.fed.us/directives/fsh/1909.15/>, all NEPA documents for which the Forest Supervisor is the responsible official, are reviewed by Supervisors Office specialists, including the Forest Environmental Coordinator, prior to approval at five points in the NEPA process. This is to ensure compliance with all legal and policy requirements and NEPA procedures.

Decision documents are reviewed for consistency with the Forest Plan, and deficiencies are corrected prior to approval. The current quarterly Schedule of Proposed Actions lists projects under way in terms of NEPA analysis. Each of these is evaluated in terms of consistency with the Forest Plan at the time of decision (documented either in a Record of Decision, a Decision Notice or a Decision Memo). A positive declaration of conformance with the Plan is required. If such declaration cannot be made the project is not implemented or the Plan is amended.

There have been several appeals of project level NEPA decisions on the Forest in FY 2007. Compliance with the requirements of both NFMA and NEPA are the most common challenges in appeals, and these appeals were no exception. All decisions appealed were affirmed in full by the Regional Appeal Deciding Officer, hence, none were reversed on NEPA or NFMA grounds, even though these were the specific points of challenge. .

3. Recreation

Are visual quality objectives (VQO) being met?

Over the 2007 year, the Forest finalized the installation of 20 new toilets. Toilets purchased were the CXT model. In an effort to try and make the facilities on the forest consistent and conform to the built image guide, the forest adopted two styles of toilets, the Cascadian and the Rocky Mountain style. The walls of the rustic Cascadian style toilet are java brown and its roof is slate green. This style will be used in campgrounds, trailheads and in areas where a backdrop of trees exists. Style and color were chosen to help blend the building into the landscape. The Rocky Mountain style toilet is to be used along the scenic byways. The Rocky Mountain style has a simulated rock base, reminiscent of the Civilian Conservation Corps days.

The Mesa Top trailhead received 4 of the Rocky Mountain style structures (2 toilets/2changerooms). This site also received solar panels. Although the solar panels are placed on a 30 ft pole, the pole blends into the tree backdrop. Several trees were removed from this site to allow for the operation of the solar panels, however, the site still maintains a natural appearance.

Plans for the Red Lady Lodge, part of Crested Butte Mountain Resort, were developed and particular attention was given to the visual quality of the structure, how well it followed the contours, how well it fit into the areas historic image, and nighttime light emissions. Other developments of the ski area are projected to have more impact on the visuals but not exceed its visual quality objectives (VQO).

Ropers Administrative site installed a landscape plan. The trees and shrubs were planted mostly along the north and west sides of the property to help create a buffer/screen for the nearby residential area. The residents of that neighborhood were concerned that the activities surrounding the bunkhouse and workshop would detract from their neighborhood setting. The Forest successfully transplanted several 8-12 foot balled and bur lapped trees and has improved the visual quality of both the administrative site as well as provide a good buffer for the residential area.

A propane generator was installed at the Woods Lake Campground in the fall of 2006. A temporary building and chain-link fence was also installed to house the generator. Neither the fence nor the building, meets the intent of the image guide. While the location of the structures partially conceals them, the forest hopes to replace the building and fence in the future. More work on the generator is planned in 2008 to convert to a solar/gas system.

The Henderson Lateral, an oil and gas project that began in late 2005 and continued through 2006 along road 265 in the North Fork Valley of the Paonia district, is recovering quite well. The area has returned back to partial retention and modification. The North Fork Valley overall, is projecting to receive more oil and gas development in the near future. This is an area that will continue to be monitored.

The Mesa Lakes Recreation area has VQOs of retention and partial retention. This area includes summer homes, day use sites and overnight facilities. Throughout 2004 and 2005 the day use and overnight facilities were reconstructed. Several trees were removed from the area for construction purposes and for hazard tree removal. In the summer home area, the thinned trees had an overall positive affect on the visual quality. Views to the lake and sight distance along the roads were improved. Within the Jumbo campground area, the removal of trees, and dead standing was much more obvious and had an over all negative affect on the visual quality. A number of potted trees were planted within the campground and day use facilities during the spring of 2007. While the trees will help meet the VQO of the area in the long term, much of this area has not yet recovered enough to meet its objective of retention and partial retention.

The Grand Mesa experienced considerable blow down in the fall of 2005 and throughout the winter of 2006. The blow down impacted several recreation facilities: Big Creek, Cobbett, Little Bear, Island Lake, and Ward campgrounds. The blow down necessitated timber clearing with a sale. Short term impacts had a negative impact on visual quality. Long term prognosis is a return to the retention/partial retention VQOs. At this time Little Bear campground and Cobbett campground have not yet fully recovered to meet their VQO of retention and partial retention.

No negative public comments have been received concerning visual impacts related to activities on the National Forest.

Are ROS recreation settings being retained?

The monitoring requirement for semi-primitive recreation opportunity is a 10% sample of completed vegetation and ground disturbing projects. No timber sales were reviewed in the field during the year to determine the effects of road construction and timber cutting on the ROS.

Earlier concerns regarding the loss of semi-primitive non-motorized acres have been addressed as a result of the National roadless issue. Generally, most new roads proposed for timber sale areas are

closed and/or obliterated after sale closure. Analysis of timber sale proposals usually addresses the need to close excessive existing roads within the timber sale analysis area. This assists in restoring some of the semi-primitive non-motorized opportunities lost in the past.

Discussions throughout the GMUG NF Forest Plan revision process addresses the significance of all ROS classes and their relationship to other proposed activities when defining the future desired condition in an attempt to reduce the loss of any further semi-primitive, non-motorized acres.

We continue to have significant concerns regarding the impact to ROS from the pioneering of routes and access into previously inaccessible areas by ATV's. Lower class trails and what might have been user-created paths are being discovered due in part to the sheer number of recreation users. This is having a significant impact on the character of these areas and is resulting in "ROS creep" towards the more developed/impacted settings of roaded natural and rural and away from the semi-primitive end of the spectrum. The Gunnison Travel Management Plan, the Grand Mesa Travel Plan, and the Uncompahgre Travel Plan addressed this. The Grand Mesa Travel Plan has been in effect for 12 years and has been effective in providing recreation opportunity for all users while substantially reducing the effect described above. The Uncompahgre Travel Plan has been in effect for two years and is making a significant difference. ATV and motorcycle use is being limited to designated routes. Compliance from users is improving, but we are still experiencing intrusions into closed areas by motorized vehicles primarily during the hunting season. The Gunnison Travel decision restricted travel to existing routes, is in its second year of implementation, and has produced similar positive results in terms of reducing the amount of off-route use and new route establishment.

In 2007 the Forest began the NEPA process for the Gunnison Travel Plan. The travel plan will designate the type of vehicle able to travel each route and if there are seasonal restrictions for the route. Both the BLM and the FS are jointly preparing the environmental document. The draft EIS should be ready by June 2008 with the completion slated for December 2008.

Are cultural resources being protected?

The Plan standards for protection of cultural resources include: completion of inventory before ground-disturbing activities; avoidance, if possible, to protect all listed or National Register eligible properties either historic or prehistoric; collection of data from sites when there is no other way to protect their values; and issuance of permits to institutions or agencies for research. In addition, sites should be maintained so as to prevent deterioration and damage from natural and human causes.

All projects that are undertakings under the National Historic Preservation Act regulations (36 CFR 800) receive cultural resource assessments prior to implementation. If needed, inventories are conducted and known sites in proposed project areas are re-visited and monitored. All heritage resources in a survey area are recorded, and eligibility for the National Register of Historic Places is determined. Reports and site records for all projects are sent to the State Historic Preservation Officer (SHPO) for consultation about the Forest's findings for eligibility and determination of effect. All sites considered eligible, or that need further data to determine eligibility, are avoided during ground disturbing activities except in special circumstances, like low-severity prescribed burning, in which it has been determined that the activity will not damage certain kinds of site materials. If avoidance is not feasible, sites may be mitigated, for example through data salvage excavations or photo-documentation. Mitigation plans are approved by the SHPO and the national Advisory Council on Historic Preservation, and are accompanied by consultation with appropriate interested parties, such as Native American tribes.

In 2007, the Forest re-visited approximately 13 known sites, recorded 87 new sites and isolated finds and conducted new archaeological inventory on about 4,200 acres. Monitoring of heritage resources including some of the forest's highest-priority archaeological sites, as well as some inventory were conducted outside of the requirements for project clearances, mainly by means of volunteer projects. In 2007 one historic structure, a 1907 fire lookout cabin, was given emergency stabilization using volunteers with the Passports in Time program. Assessments of maintenance needs were conducted at several more important sites.

One prehistoric site was monitored "before and after" grazing by livestock on the Cochetopa allotment, and no impacts and very few effects at all were noted. Overall, in 2007, no sites were found to require mitigation through data collection/excavation. No permits for research were issued.

Follow-up investigation was conducted in 2007 of six projects, representing a range of Forest activities, that were monitored by a GMUG EMS (Environmental Management System) team in 2006. This field monitoring was part of the forest's implementation of the national EMS legal compliance monitoring program beginning in 2006, and was intended to check compliance with various laws and regulations, including those pertaining to cultural resources. The project visits revealed that in five of the six projects, boundaries of the implemented activities had been changed after the archaeological surveys were conducted, resulting in areas of ground disturbances that had not been surveyed for cultural resources, a violation of Plan standards and regulations.

These projects represented surveys and project planning work that had been conducted at various times over the past 15 years. On all the projects, sites that had required avoidance or protection identified during the original surveys had been protected/avoided as planned. Four such sites were revisited for the EMS inspection. The Forest is working on ways to better ensure that changes in projects during the planning stages are reviewed for cultural resource compliance and that surveys are updated as necessary.

Is unauthorized use or are natural agents damaging or destroying cultural resource properties?

Heritage resources are continually receiving impacts that vary in degree according to the amount of exposure to wind, water, and other natural agents. Prehistoric and historic subsurface deposits tend to be naturally protected until exposed by erosion or vandalism, and surface remains can be protected if under a rock shelter or overhang. Standing historic buildings and features are impacted by moisture, weather, and animals (both wild and livestock). Humans impact sites directly through vandalism, theft, fires, littering, and illegal excavation/collecting, and indirectly through wear and tear, and compaction causing erosion in popular areas. Systematic site monitoring suggests that a small number of sites are negatively impacted each year from natural and human causes, such as erosion, decay, fire, and illegal vandalism. Most of the Forest's standing historical structures suffer from decomposition/deterioration caused by time. One case of intentional damage due to vandalism to a historical site, Raber Cabin, was reported in 2007.

Wilderness

There are approximately 39,375 acres of wilderness on the Forest (about 7% of the total) that do not have wilderness management prescriptions assigned to them. These include the Fossil Ridge Wilderness – 33,000 acres, the Oh-Be-Joyful addition to the Raggeds Wilderness – 5,500 acres and the Bill Harelson Creek addition to the Uncompahgre Wilderness – 815 acres. All of these areas were designated by the Colorado Wilderness Act of 1993 and post date the Forest Plan amendment of 1991. In addition, the Roubideau and Tabeguache Special Areas, currently being managed to maintain a

wilderness character, do not have management prescriptions assigned to them. These will be addressed in the Forest Plan revision.

Observations reported in the FY96 Monitoring report concerning prescribed natural fire, obsolete standards and guidelines, and campsite conditions are still valid.

Revision of Special Orders for the GMUG Wilderness Areas was completed in 2007. The Orders were reviewed for consistency and to determine if they reflected current needs. Coordination occurred with adjoining Forests with shared Wilderness Areas. Changes included smaller group size limits, restricting recreation stock use near water, and pet restraint specifications

In 2004 the mandatory self-registration program for the GMUG NF side of the Maroon Bells/Snowmass Wilderness Area continued in an attempt to monitor wilderness use levels. The Forest Service expects to implement the self-registration program in additional wilderness areas over the next few years.

Air & water quality monitoring occurred in the West Elk Wilderness.

Noxious weed identification, control and mapping continued in the West Elk and Raggeds Wilderness Areas.

Monitoring of websites continued in an attempt to find advertised geocache locations in Wilderness Areas on the GMUG NF. Geocache sites are sought out and removed when discovered.

Dispersed camping sites on the Paonia district were identified and GPS-ed during 2006 and 2007. Over 600 sites were found and mapped outside of the wilderness. As of 11/07, 95% of the district outside of the wilderness has been surveyed. Due to the scale of wilderness and mileage of trails on the district, mapping of dispersed camping within the wilderness will need to be conducted as areas are visited for other reasons. This data will also be used for cumulative effects analyses in NEPA, travel management planning, and law enforcement.

4. Wildlife

Are capability levels being achieved to sustain desired populations for vertebrate wildlife species?

For most species for which data is available to make this determination, populations are supported at sustainable levels across the Forest. Mule deer populations are improving somewhat over the population levels recorded for the time period prior to the year 2000. Bighorn sheep populations are stable with some declines observed in some populations, particularly the Desert Bighorn. This decline may have resulted from the Deserts mixing with domestic sheep. Black bear populations seem to be stable to somewhat lower due to a period of drought years from 2000 to 2003. Elk populations are near population objective levels in most Data Analysis Units as delineated by the Colorado Division of Wildlife. Some units within the Forest are slightly below population objective levels while others are slightly above population objective levels. The Forest has completed a revision of the Forest's Management Indicator Species list. A non-significant Forest Plan amendment was prepared to eliminate species from the current MIS list that are not easily monitored and do not represent the habitat requirements of other species found in similar habitats. The Forest has selected the following species as MIS species: Common Trout, Abert's Squirrel, Pine Marten, Northern Goshawk, Brewer's Sparrow, Red-naped Sapsucker, Elk and Merriam's Wild Turkey. A report containing information concerning biology and distribution, specialized habitat requirements, limiting factors, Forest-wide habitat condition and trends, population numbers and trend analysis for some species, and monitoring protocol and strategy has been completed.

This Forest-wide MIS assessment has been updated to reflect habitat changes that have occurred since June 2001. Data is limited to determine population levels for the pine marten, goshawk, red-naped woodpecker, Brewer's sparrow, Abert's squirrel, common trout, and the Merriam's wild turkey. Goshawk and Abert's squirrel population surveys continue on some ranger district containing habitat for that species. Goshawks are now being monitored using a Regional Survey/Database approach.

An intensive monitoring program continues on the Forest for small forest owls. This monitoring effort has been ongoing for 14 years and has resulted in the gathering of important population data primarily for the boreal owl, saw-whet owl, and flammulated owl. 2007 saw a decrease in the number of nests found compared to the mean. One boreal and four flammulated nests were recorded to have been successful. Approximately 10,000 acres of habitat are monitored annually for these Forest Owls,

Are the minimum habitat needs for vertebrate wildlife species being met? Are seral stages, edge index, and spatial habitat requirements being achieved?

All projects comply with Forest Plan direction, including standards for lynx, old growth, edge, snags, down woody material, and vegetative composition and structure. Most such requirements apply at the diversity unit scale; to the extent that each diversity unit meets standards for old growth, snags, etc., we can be assured that they are met at the Forest level. However, habitat and diversity standards in the Forest Plan are primarily associated with vegetation management treatments. The implementation of big game habitat improvement projects on the Forest will substantially increase the acreage of vegetation manipulation on the Forest.

Is existing or created habitat providing the most effective use by big game within desired objectives?

Habitat effectiveness is limited primarily by open road density. Some areas on the Forest, are less than the objective of 40% (or higher for specific management areas) for habitat effectiveness for elk and deer. Approved travel plans are in place on the Grand Mesa and Uncompahgre National Forest's. A revision of the Gunnison National Forest Travel Plan has just been initiated.

On the Grand Valley Ranger District photo reference points were established around the perimeter of wildlife habitat improvement projects on the north end of the Uncompahgre Plateau. These projects are being done to rejuvenate big game winter range. This project was completed in 2006 as part of the North Uncompahgre Wildlife Enhancement Project and will be monitored to determine habitat improvement effectiveness using this method of treatment. Travel management implementation continued on the Grand Valley and Norwood/Ouray Ranger Districts in 2007 with an number of roads being closed to improve habitat effectiveness for wildlife.

Monitoring of selected MIS species was done on several districts in 2007. The results of these are summarized below.

Goshawk

2007 Northern Goshawk/Other Raptor Nest Monitoring Summary

Gunnison District: The Northern Goshawk (*Accipiter gentilis*) is a Management Indicator Species (MIS) as identified in the Amended Land and Resource Management Plan (Forest Plan) September 23, 1991 for the Grand Mesa, Uncompahgre and Gunnison National Forests. The goshawk is a sensitive species on the R2 Regional Forester's list. This requires nest site surveys to be conducted within project areas that encompass potential goshawk habitat prior to any project activities being conducted. The Cochetopa Hills Project area was surveyed in 2007. In addition, yearly monitoring of occupied goshawk territories on Forest Services land were conducted beginning in May.

Northern Goshawk (*Accipiter gentilis atricapillus*) nest surveys, broadcast calling and ground nest searches were conducted using the Forest Service Northern Goshawk management guidelines developed by Reynolds et al. (1992), with inventory protocols established by Bosakowski (1999) and Kennedy (2003).

Gunnison Territories:

A goshawk territory as defined by Reynolds (1992) refers to the area defended by a pair of goshawks and may not include a nest. At the start of the 2007 season there were nineteen known goshawk territories within the Gunnison Basin on Forest Service lands. During the spring through the fall goshawk surveys and/or other project work, four new active territories were found. A single active nest was found in each of 2 territories. An active nest and 2 partial nests were found within the third new territory. A nest was not located in the fourth new territory. Three additional nests were also located. All three nests were in aspen stands and well maintained. Species occupancy was not determined. Prey remains were found at one of the three nests. If these three nests are occupied by goshawks an additional three territories will result.

On known territories, 8 previously unknown nests were located. Six nests were well maintained, one of which had pellets near the nest tree. Heavy rains had occurred prior to the nest being found, indicating that the nest was possibly active in 2007 but not confirmed. The last 2 nests found were partial. Another partial nest was found in an area with no known goshawk activity. Other nests were searched for within this area with negative results. This nest has been excluded from the data set because definitive species occupancy can not be determined.

By the end of the 2007 field season, a total of twenty-three historic and current territories were identified on the Gunnison Ranger District. Territory occupancy was determined by observing an active nest, nesting activity within the past 5 years or adults observed on territory. Thirteen territories were active in 2007. One known goshawk territory had an active nest with species undetermined, one territory had a weathered goshawk feather at the nest, and one territory was unoccupied. Seven other territories are classified as historic with no goshawk nesting activity in the past 5 years. Four other nest areas need to be confirmed in 2008 for raptor species occupancy but have a high probability of goshawk occupancy based on the nest sites. Active territories without active nests reflect the presence of non-egg laying goshawks or alternate nests unknown to field personnel. Goshawk territory status for 2007 is summarized in the following table.

Gunnison Nests:

A total of forty-one known nests were visited and fifteen new nests (11 intact, 4 partial) were found in 2007 from May through November. Seven of the new nests were located on known territories. Two known nests were not visited of which one could not be found and the other had not been active for many years.

Nine nest areas (may include more than 1 nest) were visited in the spring and early summer. These nests were visited based on activity in 2006 or within the past 4 years. During the first nest checks, one nest was found to be active based on an adult incubating. Two territories were determined active based on adult goshawks observed in the area even though known nests were inactive. Lack of manpower prohibited other nest visits early season or searching for alternate nests in active territories.

Three of the new active territories (with nests located) mentioned above, were found in July and August. In October a nest within a known goshawk territory had been active based on prey remains but the species was not determined (no feathers, pellets). The following table summarizes nest status.

2007 Goshawk Nest Status

(does not include nests that were lost prior to the 2007 season)

Table 3:

Nest Status	# Nests
Active	6
Recently active	5
Inactive	14
Intact	14
Partial	12
Gone	3
unknown	2

Estimated acreage surveyed on Gunnison Ranger District during 2007 for northern goshawk was 5,806 ac. (2,349.6ha.).

Paonia Ranger District: Goshawk nest monitoring and broadcast surveys combined with foot surveys were conducted following Forest Service Northern Goshawk management guidelines established by Reynolds et al. (1992), and inventory protocols developed by Bosakowski (1999) and Kennedy (2003).

On the Dyke Creek Territory all old nests were located and one other nest located, however, no goshawks were located. At the Johnson Gulch territory one nesting pair was monitored and on nestling was produced. No other Paonia territories were monitored due to time and money constraints.

On the Norwood/Ouray districts over 400 acres of project acres were surveyed using calling survey techniques, no goshawks were located. Two active goshawk nests were located on the Norwood Ranger District. These nests were closely monitored and both nests hatched young successfully but all were killed by predators.

Abert's Squirrel :

The Abert's squirrel is a Management Indicator Species for Ponderosa Pine within the GMUG National Forest. Surveys for Abert's squirrel began in the late 1990s and continued the summer of 2007. Abert's squirrels, nests and feeding sign were located on Forest lands.

There appears to have been a decline in the abundance of Abert's squirrels in the past couple of years

2007 surveys were repeated on 9,000 acres of habitat that were inventoried in 06 using a feeding index sampling technique. Results indicate a stable to downward trend in squirrel populations throughout the sampling area from 2005-2007.

There appears to have been a decline in the abundance of Abert's squirrels in the past couple of years. This statement is based solely on the "no-activity" found in previously active areas as determined by finding current used nests and/or feeding sign. The Gunnison River Basin has been in a drought (summer and winter) for several years. This is the primary suspected contributory factor regarding the apparent decline in the Abert's squirrel population.

A combined spring feeding index method described by Dodd et. al. (1998) was used to sample Abert's squirrel activity within ponderosa pine forest habitat on the Uncompahgre Plateau.

Habitat analysis using ArcGIS was conducted to identify potential Abert's squirrel habitat on the Plateau. The attribute table for ponderosa pine cover type was queried to identify stands of ponderosa

pine that were > 60 acres in size and structural stages 4A, 4B, and 4C. This resulted in the identification of nearly 400 sites.

Sampling was conducted within two proposed areas. Estimated squirrel density appears to be relatively low and varied with structural stage and observed structural habitat features. The lowest densities were in intensively managed even-age pine stands with no interlocking tree crowns and little to no vertical structure (intensively managed 4A stands). The highest densities were in stands of uneven-age pine having clumpy distribution or groups of mature trees with interlocking crowns (structural stages 4B and 4C). These findings appear to validate the habitat models developed by Dodd and Patton for southwestern ponderosa pine.

Neo-tropical Migrants and Other Bird Species Breeding Bird Surveys

The Norwood and Ouray Ranger Districts continued to conduct breeding bird surveys on five survey routes located on the Uncompahgre Plateau. The routes were established in 1998 with the goal of surveying them annually. One of the purposes of the surveys is to sample various habitats on the Forest for the presence of MIS and other species of interest. Data from these surveys is sent to the Colorado Bird Observatory. All 5 BBS routes were repeated again in 2007.

Pine Marten

American pine martens (*Martes Americana*) are a sensitive species in the R2 Regional Forester's list. It is also one of the eight MIS species on the Forest. This requires surveys for presence/absence of American pine marten to be conducted within project areas that encompass potential pine marten habitat. The detection of pine marten requires the potential effects of treatments within the project on this species to be addressed prior to the implementation of those treatments.

Gunnison Ranger District:

All pine marten survey stations were chosen based upon marten habitat requirements, the suggested distance between sites and continuity between box locations. The Zielinski (1995) survey method requires the placement of track plate boxes within suitable habitat, with each box ideally separated by .5 miles (804 m.). Stations were placed within 4B Habitat Structural Stage (HSS) conifer and a few aspen stands in the additional Cochetopa Hills Project Area. Conifer 4C stands are not present in the area. Suitable timber stands were identified using GIS coverages previously generated by the Gunnison District Forester through aerial photo interpretation. The aerial photos used were taken in the 1980's. The district forester is currently updating the HSS data. The most current HSS data available was used for determining pine marten station locations. Potential sites were confirmed in the field and adjusted accordingly. Due to the low mesic aspect of the landscape an effort was made to place stations near any water found. Distance between stations was .5 miles (804 m.) apart unless the HSS, habitat type, roads or large open parks made the location unsuitable for potential pine marten detection. Two stations were located within 3B and 4A stands to maintain continuity across the landscape.

Thirty-two pine marten detection stations were placed in conifer cover types and 2 in aspen. Spruce/fir were the predominant tree species present in stands surveyed. Aspen was frequently a minor component within the spruce/fir stands. Only two pine marten stations had Lodgepole pine mixed within the stand. Some spruce/fir units identified as 4B were not surveyed due to the small size of the unit and in some cases being surrounded by extensive meadows.

All stations had negative results for pine marten. Pine martens were not observed or scat found. The landscape lacks consistent mature conifer stands, down wood and regular mesic features.

Other mammals recorded at stations were red squirrels, chipmunks (species unknown), long-tailed weasel (1), golden-mantled ground squirrels, mice, bear (1) and a bushy-tailed woodrat. Chipmunks and red squirrels were the most frequently recorded mammal. A bear flattened 2 boxes within twenty-four hours after placement. The bear did not return to the boxes.

Estimated acreage surveyed during 2007 for pine marten was 7656 ac. (3098.2ha.).

The protocol described by William J. Zielinski (1995), which used track plate boxes (photos 1 & 2) to detect the presence of American martens, was used as the basis for this survey. Once the boxes were constructed, six boxes (1-6) were set up in the most suitable habitat (see attached GIS maps). The boxes were placed at least one-half mile apart. They are being checked every 2-3 days and picked up on day 13. The boxes were baited with meat scraps.

Paonia Ranger District:

During the winter of 2006/2007, remote camera stations were placed on the Paonia district to field test new cameras and determine the most useful bait combinations for surveys on the unit. Five sites were monitored, using a modified version of Zielinski. Effort was limited due to snow and lack of availability of safety partners to set up stations using snowmobiles. The effort determined that the cameras are limited in their ability to operate at extremely cold temperatures, and that suggested bait combinations may be less effective than desired. Only red fox and snowshoe hare were photographed at these stations. Efforts will continue in the winter of 2007/2008.

Marten were observed incidentally during the summer of 2007 on the Paonia district, and this data will be incorporated into FAUNA and used for future planning purposes.

Brewer's sparrows and Red-naped sapsuckers:-

Outside of individual project areas and along the Breeding Bird Survey routes, surveys were not conducted for these species.

Merriam's wild turkey:

Data on this species is collected by the Colorado Division of Wildlife. Wild turkey population on the Forest seems to be sharply increasing and populations are pioneering into previously vacant habitat.

Common trout

Twenty-eight reaches located on 11 streams were sampled to obtain a population estimate of fish present. Seven of the 28 sites were repeated sites from the 2001-02 sampling season. Brook trout and Colorado River cutthroat trout were the dominate species collected. Blue sucker (Region 2 sensitive species) were collected in low numbers in Dyke Creek and upper West Muddy Creek on the Paonia Ranger District. Data has been entered into the Forests' aquatic database and once Data obtained from these sites plus population data from Colorado Division of Wildlife is being used to complete an assessment of common trout population status and trend in the winter of 2008.

5. Fisheries

Are we managing habitat for the needs of trout and macroinvertebrate species? Are we meeting standards and guidelines?

Culverts on perennial streams were inventoried to determine if they allow free passage of aquatic organisms and maintain floodplain function. Between 2005 and 2007 approximately 300 culverts were inventoried, which represents approximately 75% of the known culverts on national forest administered lands. Of the 300 culverts, 232 have been assessed using the FISHXing vers. 3 software. Sixty-four percent of the culverts were determined to provide aquatic organism passage, 24% were determined to be not to provide passage and 11% are border line and require additional assessment. Fish species known to be affected include brook trout, brown trout, rainbow trout and Colorado River cutthroat trout. The remaining culverts are scheduled for inventory in 2008. Data from these inventories will be used to develop a strategy to address passage issues on the Forest. While site specifically local trout populations are affected by a lack of passage, it is not believed to affect overall viability of common trout at the Forest scale.

Since 2004 the Forest has been collecting data from watersheds/stream reaches largely unaffected (reference reaches) from past or current management activities. Once sufficient reaches have been sampled, data will be used to determine “robust stream health” in accordance with Region 2 Watershed Conservation Practices Handbook. In 2007, an additional 10 stream reaches were evaluated and have been added into a database containing 54 stream reaches collected in previous years. Analysis of these data is scheduled for 2008.

6. Stream habitat

Are we meeting standards and guidelines for minimum flows?

Not as stated in the current Forest Plan. The current Forest Plan standard prescribes bypass flows as a primary means of protecting flow dependant values that are impacted by diversions on the Forest. This has been a very contentious issue, which has had major ramifications regarding State versus Federal jurisdictional questions. In FY07 the Forest did not condition any special use permits for a water diversion with bypass flow requirements.

One key component of the Pathfinder Project strategies is reliance on the Colorado Instream Flow Program administered through the Colorado Water Conservation Board to obtain instream flow water rights for streams. In FY07 Forest staff continued to monitoring flows in Horsefly Creek and conducted additional field work in anticipation of submitting a minimum flow recommendation to the Colorado Water Conservation Board in FY08.

The Forest is anticipating that a number of water diversion permits will be coming up for renewal in the next several years for which minimum flows will be at issue. The subject of instream flows and how to manage water uses on the National Forest will be critical element in the Plan revision process that is now underway and it is expected that the Pathfinder Project Steering Committee report will provide useful recommendations that can be adopted or will influence how instream flows are managed and the standards that will be developed for the Forest Plan to address instream flow protection. The Region’s Watershed Conservation Practices Handbook (Standard No. 7) as well as Departmental and Agency policies and direction will also provide direction for instream flow management and protection standards.

Across the GMUG, and particularly on the Grand Mesa, private parties hold many senior water rights, some pre-dating establishment of the national forests. Coordination with water right holders represents the single greatest challenge to achieving minimum flows for riparian ecosystems.

7. Threatened, Endangered, and Sensitive Species

What is the status of threatened and endangered plant and animal species?

The U.S. Fish and Wildlife Service has identified the following species as threatened, endangered, and candidate species for the Grand Mesa, Uncompahgre, and Gunnison National Forests:

Uncompahgre Fritillary Butterfly (UFB) – Endangered

Population Monitoring is and has been an essential part of the UFB Recovery Program. In 2007 population monitoring was again implemented in two forms. The most general included all known colonies and simply involved confirming the presence or absence of adult UFB during the flight period. Transect data to estimate actual abundance was gathered for colonies on three major sites on the Forest.

Quantitative Results - In 2007, a field crew of four observers conducted multiple sample inventories of the Uncompahgre Fritillary Butterfly at three locations on the Forest. A total of six subpopulations were monitored.

Qualitative Results- Qualitative sampling for persistence at all known sites was accomplished during the 2007 UFB flight period. There were some sub-colonies also where persistence was not detected, however, persistence was evident at least at some sub-colonies. Numbers of butterflies were typically low at all sites and may be indicative of a decline in the odd year populations. Long term data regarding most populations is still unavailable since most of these populations were discovered in the last six years.

Recommendation for future monitoring: It is recommended that monitoring continue into the future to develop long term records that will enable the hopeful recovery of this species.

Bald eagle – The Bald Eagle has been taken off the endangered species list since last years monitoring report was completed. The Bald Eagle is primarily a spring and fall migrant and a winter resident. Some nesting occurs in the basins, but all nests found to date are located on lower elevation lakes and streams just below the Forest boundary. Bald Eagle populations are continuing to be monitored by the Colorado Division of Wildlife.

Mexican spotted owl (MSO) – Threatened. . The Norwood, Ouray and Grand Valley ranger districts did not have any projects proposed within potential MSO habitat, therefore no presence/absence surveys were conducted in 2007. Surveys for this species are limited to proposed project areas in areas mapped as potential habitat on the Forest. Mexican Spotted owls are suspected to be on the west side of the Uncompahgre Plateau but no species or nests have been found.

Boreal Western Toad – Sensitive (Previously a candidate- may be reviewed again in the future)

Several boreal toad populations have been found on the Forest. In the fall of 2004 approximately 15,000 tadpoles, metamorphs, and 3-week-old toadlets were released in three ponds on Kannah Creek in a re-introduction effort conducted by the Colorado Division of Wildlife in cooperation with the GMUG National Forest. The table below lists the sites and monitoring efforts in 2006 on the Forest. 2007 data is still being tabulated.

SOUTHERN ROCKY MTN. BOREAL TOAD BREEDING LOCALITY MONITORING SUMMARY – 2006 **Known Active Sites: 40**

Locality Name	Site ID	Adequate Monitoring	Active Breeding	Minimum Adults	# of Yearlings	# of Sub-adults	Minimum Egg Masses	# of Tadpoles	# of Metamorphs
Elk & West Elk Mountains									
Triangle Pass	GU01	Yes	Yes	8/2/3	0	1	13	3000+	500+
West Brush Creek	GU02	Yes	No	0/0/0	0	0	0	None	None
Brush Creek	GU04	Yes	Yes	9/4/4	9	11	8	3000+	100-200
Upper Taylor River	GU05	Yes	No	4/2/0	0	3	0	None	None
Conundrum Creek	PI01	No	No	0/0/0	0	0	0	None	None
East Maroon Creek	PI02	No	Yes	2/2/0	10	5	2	1000-3000	50-100
Snowmass Creek (<i>new</i>)	PI05	No	Yes	0/1/0	1	0	0	None	50+

Grand Mesa									
Buzzard Creek (<i>new</i>)	ME01	No	Yes	0/0/0	0	0	0	3000+	500

* No breeding activity

** This amount includes tadpoles, metamorphs, and 3-week-old toadlets

Multi species amphibian surveys were conducted at approximately 90 locations on the Paonia district during 2007. No boreal toads were located at any of these locations. The Buzzard Creek site was visited for training in June of 2007, at which time 17 juvenile toads were located along Buzzard Creek.

Canada lynx - Threatened.

Canada lynx populations are increasing statewide as a result of the CDOW's reintroduction efforts. Lynx are being intensively monitored by this agency. Lynx are now known to occur in many areas on the Forest. Lynx management guidelines are incorporated into all Forest activities.

Uintah Basin Hookless Cactus – Threatened.

No populations of this species have been found on the Forest. Known occurrences of this species are found on the Grand Mesa but at low elevations on Bureau of Land Management lands.

Gunnison Sage Grouse – (Sensitive Species-previously a candidate species and will be reviewed in the future)

The Colorado Division of Wildlife completed lek counts on all known leks on and adjacent to the GMUG in 2007. CDOW researchers captured and radio collared adult birds to determine reproductive success and dispersal within the study area. Forest Service technicians also completed walk-through surveys of sage grouse habitat on the Naturita Division and Iron Spring Mesa to assess habitat conditions and search for sign of grouse use. Yes. We also used this info from the Naturita Division to provide input to the EA for livestock grazing in that area. Habitat conditions on the allotments were also inventoried and evaluated for sage grouse and included as a key feature in management of these allotments. Habitat condition standards of the Rangewide Conservation Plan are objectives for suitable habitat, and grazing practices are required to be modified to meet these standards.

Sage grouse nesting occurs on only one area of the Gunnison Ranger District on the GMUG N.F. These nesting grounds or leks are surveyed each spring by the Colorado Division of Wildlife. Forest personnel assist in these surveys and conduct habitat improvement in the area to enhance habitat for the sage grouse.

Multi-species amphibian surveys were conducted at approximately 90 locations on the Paonia district during 2007. No boreal toads were located at any of these locations. The Buzzard Creek site was visited for training in June of 2007, at which time 17 juvenile toads were located along Buzzard Creek. Leopard frogs were located at several sites near Paonia, including at previously undocumented sites which offered a reasonable expectation of presence based on previous data on distribution of the species on the district. Current distribution on the district is not accurately mapped due to lack of personnel and the quantity of potential sites on the unit.

Mist net surveys for bats were conducted on the Paonia district for the first time in 2007. Ten sites were surveyed, including several sites near current or future projects. Six species of bats were located, none of which are FSS species. A detailed PowerPoint presentation on the survey efforts is currently available.

Additional Species

Four additional endangered species of fish occur downstream of the GMUG, and could be affected by management activities on the Forest:

- Colorado pike minnow - endangered
- Bonytail chub - endangered
- Humpback chub - endangered
- Razorback sucker – endangered

Small populations of these species have been located downstream, well outside the National Forest Boundary. Additional inventories are being conducted to determine population size and distribution within selected drainages.

Colorado River cutthroat trout – In 2007, geneticists from several universities published a paper identifying a misidentification of cutthroat trout populations within the range of greenback and Colorado River cutthroat trouts (Metcalf, J.L. et. al. 2007). Several water bodies containing previously putatively pure populations of Colorado River cutthroat trout in Western Colorado comprise another subspecies of trout, greenback cutthroat trout. Greenback cutthroat trout are listed as threatened under the Endangered Species Act, As Amended. A few of these populations have been discovered on the GMUG. Due to these findings, the Forest is now working with the Greenback Recovery Team and Fish and Wildlife Service to protect these populations of greenback. In additions, genetic material was collected for genetic analysis from 11 of the core conservation populations of Colorado River cutthroat trout known to occur on the Forest. Results are expected back in April 2008.

General Information:

All projects on the Forest now must comply with analysis protocols considering the effects of proposed actions on potential lynx habitats. A federal recovery plan is being developed.

Each proposed project on the GMUG requires a Biological Assessment (BA) of potential impacts to threatened, endangered, proposed, and candidate species, and a Biological Evaluation (BE) which is completed for all GMUG sensitive species. If the Biological Assessment concludes that a project “may affect” a threatened or endangered species, the Forest Service consults with the U.S. Fish and Wildlife Service before proceeding. Projects are being designed and implemented to improve/enhance habitat for these species where possible.

8. Riparian

Are we managing riparian habitat to meet the standards and guidelines in the 9A management prescription?

Most of the effort to assess riparian conditions has been done by range vegetation specialists as they undertake range analysis work in preparation for allotment planning. Monitoring efforts have focused on the collection of shrub canopy cover and abundance of riparian obligate species within the water influence zone. Some information is also collected using the proper functioning condition protocol in conjunction with monitoring of large grazing allotments. Range specialists rely on the line intercept, green line and cross section methodologies to collect this information.

Each project environmental analysis includes the relevant standards and guidelines for Management Prescription 9A as management requirements/mitigation measures.

In many cases, projects more than meet the standards set for Management Prescription 9A by incorporating more recent science, including design criteria from the Watershed Conservation Practices Handbook for the Rocky Mountain Region and assessments of Properly Functioning Condition (PFC). The Forest has recognized the Watershed Conservation Practices Handbook as the state of the art in terms of guidance for protecting watershed resources.

In FY07 the Forest began development of an ecological classification for riparian areas that will be used to determine site potential as compared with current conditions. This is envisioned as a multi-year project with the Forest Ecologist doing the majority of field work and manuscript preparation. Work for the San Juan Mountains portion of the Forest was completed in FY07. Expansion to other parts of the Forest is planned when the San Juans Landscape is finished.

Are we managing riparian areas to reach the latest seral stage possible within the stated objectives?

Project decisions are applying criteria, which meet or exceed Forest Plan direction for management of riparian areas. At the same time, timber harvest and road construction are taking place at levels substantially lower than projected in the Forest Plan. Riparian areas are being managed for the latest seral stage possible within stated objectives.

9. Range

Are we meeting the utilization standard in the Forest Plan?

All recent Allotment Management Plans developed on the GMUG include standards at or above utilization standards set in the Forest Plan. Environmental analysis has been completed on about 135 allotments on the GMUG since 1995. This effort is expected to result in the application of standards that will improve long-term rangeland health Forest-wide.

On a few allotments utilization standards were not met. Actions to correct situations which lead to over use on these rangelands are underway. Most of the newer AMPs use a combination of either stubble height standards or grazing response index to manage grazing use.

In 2007, we monitored and evaluated approximately 200,000 acres in preparation for a range NEPA analysis. Additionally, 376,373 acres were managed to standard as determined by monitoring efforts. Rangelands are generally stable or in an upward trend, with isolated instances of downward trend.

Range personnel monitor achievement of these standards by rereading and establishing permanent transects in upland and riparian areas, measuring utilization and stubble height of residual forage, checking permittee compliance with annual operating plans, assessing properly functioning condition of riparian areas, and ensuring that AMP objectives are being attained.

What is the habitat condition and trend?

Current vegetation inventories show stable and upward trend in range condition Forest-wide. All show long-term improvement in range condition.

What is the level of noxious weed infestation and need for treatment by species?

Noxious weeds continue to be a significant source of concern on this forest and throughout the state. District personnel report increased numbers of weed species and occurrences on the forest each year. Information about noxious weed locations, species, and infestation size is being stored in the Forest GIS, as well as in project files, and USGS maps. The GMUG weed program relies on the actions laid out in the Forest Noxious Weed Management Strategy, which provides for education, prevention, containment, and control, and emphasizes integrated pest management. Weed-free feed restrictions are enforced, and all districts are actively involved in biological control of thistles. All ranger districts have ongoing cooperative programs with their respective county weed boards to treat weed infestations in a planned and coordinated manner to ensure that we approach weed control in the most comprehensive manner possible. Treatment of utility lines, special use permit areas (such as ski areas and reservoirs), and ditches is done cooperatively with the owner/permittee. There is a significant shortfall in staffing and funding for both the treatment and inventory work that needs to be completed. We estimate that upwards of 30,000 acres on the GMUG are affected by 15-20 species of noxious weeds, including several on the State “A, B and C” lists.

The following table lists the current invasive plant species inventory for the GMUG. Information is from a combination of Forest Service and county inventories. The majority of inventoried infestations occur along roads.

A list of invasive Plants for GMUG NFs include:

Species	Total Acres	Species	Total Acres
Scentless Chamomile	2	Bull thistle	629
Mayweed Chamomile	11	Houndstongue	13,104
Common burdock	245	Russian olive	88
Cheat Grass (Downy Brome)	2,209	Leafy spurge	418
Plumeless thistle	11	Dame’s rocket	11
Hoary cress (Whitetop)	448	Black henbane	31
Musk thistle	443	Perennial pepperweed	78
Diffuse knapweed	40	Dalmatian toadflax-broadleaf	57
Spotted knapweed	1,121	Yellow toadflax	981
Russian knapweed	828	Scotch thistle	56
Yellow starthistle	25	Tansy ragwort	1
Oxeye daisy	1,111	Saltcedar (Tamarisk)	227
Canada thistle	1,651	Sulfur Cinquefoil	1,000
		TOTAL	24,826

Introduced ornamental species like yellow toadflax and oxeye daisy are a growing concern around private land inholdings, particularly in the Mount Crested Butte, Mountain Village and Powderhorn areas.

10. Timber

Are regeneration survival and stocking standards being met?

Regeneration surveys are being conducted one, three, and/or five years after final harvest on sites that are to remain in a forested condition. In 2007, 1354 acres were certified as meeting or exceeding regional standards for successful regeneration.

The forest also conducted regeneration surveys in 2007 to assess the extent of stocking in wildfire areas where no subsequent site preparation was completed. The forest certified approximately 807 acres as successfully regenerated following wildfire activity.

Tree planting continued in the Burn Canyon area of the Norwood Ranger District where catastrophic wildfire occurred in 2002. Surveys were conducted on 813 acres after the first or third growing season. After the first year following planting ponderosa pine, 96 percent survival was attained. After the third year following planting of ponderosa pine, 54 percent survival was attained. Fifth year surveys completed in Burn Canyon attained a survival percent of 50 percent.

The forest has been monitoring this ongoing work for 5 years. The planting stock was changed to containerized seedlings a few years ago which is showing increased survival rates. Shade tubes have also been implemented, which also appears to have aided in increasing survival rates. Reforestation personnel believe the drought over the past few years has kept survival rates below the average potential for containerized planting stock. However, the harsh planting conditions magnify the advantages of various planting procedures. The forest has moved away from mechanized tree planting with bare root planting stock that was common at the beginning of the Forest Plan period in favor of hand planting containerized planting stock (with or without shade tubes) in both spring and fall plantings. Comparisons will continue as planting land affected by catastrophic occurrences continues.

11. Soil and Water

Are standards and guidelines being implemented on projects with the potential to impact soil and water resources?

The Forest is continuing to incorporate appropriate standards and guidelines into the management of all ground disturbing activities, with special emphasis on the effects of roads, water development facilities; energy development activities; unmanaged recreation; and livestock use in our watersheds. For livestock-related actions this is being done as grazing plans are updated and Forest Service officials and operators agree to the details of annual operating plans. The management of the existing road network continues to be a challenge to the National goal of maintaining and restoring healthy watersheds. Also the watershed improvement program and road maintenance funds have been targeting roads which are resource problems for either closure (decommissioning) or correction of problems, i.e., surfacing, adding drainage, replacing drainage crossing, etc.

Construction of pipelines, well pads and access roads associated with energy development is a major workload element for the Forest. Impacts to soil and water resources has been a concern and on the ground activities are being monitored by both soil and water specialists, as well as project administrators, to determine if design criteria are being implemented as prescribed and whether they are effective at limiting impacts. Indications are that short term impacts are occurring from construction and use of energy development roads. The magnitude of these effects is influenced significantly by soil type and weather conditions. Once initial construction and development occur the impacts are greatly reduced to watershed resources and in some cases where existing routes were utilized the impacts may actually be less than before use by energy companies, because of upgrades in road drainage and surfacing.

It is recognized that many Forest Plan standards and guidelines are becoming outdated or are not sufficiently well defined. New approaches and tools have been developed since the Forest Plan was

adopted which better serve our current understanding of physical/ecological processes, reflect public values and respond to political and legal requirements.

There appears to be some inconsistency in how the Forest is defining the water influence zone (WIZ) and questions raised on what should be the appropriate degree of protection from mechanical disturbance adjacent to intermittent and ephemeral streams. It has been proposed that more definitive direction on this subject be included in the upcoming revised Forest Plan. In response to this questions several training sessions were provided in FY07 to Forest personnel by soil and water specialists which address the subject of WIZ management and appropriate design criteria. Another area in which some improvement could be made is in the development and implementation of stormwater runoff plans and emergency spill containment plans.

In 2007 a few projects were evaluated in the field to determine compliance with soil and water plan guidelines. These projects were: slump repair on a ski run for Powder Horn Ski Area; Winter operations of a commercial timber sale; a comprehensive review of the vegetative recovery of nine(9) rather large wildfires that have occurred on the Forest dating back to the early 1990's, with special emphasis on those fires that have occurred from 2002 on; and closure of travel routes to reduce wildlife and watershed impacts.

These projects were found to be in compliance with plan guidelines and were implemented in accordance with project NEPA requirements. In years past it has been acknowledged that there is some inconsistency in how the Forest is defining the water influence zone and questions raised on what should be the appropriate degree of protection from mechanical disturbance adjacent to intermittent and ephemeral streams. Much work has gone into providing clearer definitions and directions for these landscape areas and progress has been made in two ways toward this. First is the development of resource guidelines for Watershed Resources that occurred during the preparation of the proposed Forest Plan. Even though the Forest Plan process has been halted, these guidelines will be carried forth as much as possible. The second effort to in this area has been the initiation of a process to be used to evaluate condition of the Forests Riparian and wetland areas. This is being called "Delineation and Evaluation of Riparian Areas and Wetlands on the Grand Mesa-Uncompahgre-Gunnison National Forest Project" and is being conducted by Barry Johnston, Forest Botanist/Ecologist. In this process there will be clear definitions of Riparian and wetlands for the Forest to refer to.

It has also been noted in the past that another area in which some improvement could be made is in the development and implementation of stormwater runoff plans and emergency spill containment plans. This is being accomplished by sending various Forest Personnel to " Storm Water Prevention Plan training" that the State of Colorado has put on over the last year. The Forest also held inhouse Watershed conservation practices training workshop a couple of times during 2007.

12. Minerals

Are operating plans being followed and reclamation completed to meet management requirements and standards and guidelines?

Locatable and Salable Minerals

Yes, operating plans for locatable and salable mineral operations are being followed and reclamation is being completed to meet management requirements and standards and guidelines. Forest plan standards are effective and objectives are being met. Proper implementation, administration, and

enforcement of mineral operations are contingent upon a plan of operation. Review and approval of the reclamation plan ensures that mitigation measures are in compliance with Forest Plan standards and guidelines.

A plan of operations for locatable minerals must adequately describe the approved operation with sufficient quantitative information to verify and enforce compliance with the plan, include a termination date, identify the mining claim with an accurate location and site map, list the claimants and/or operators, include a detailed reclamation plan with quantitative and measurable reclamation standards, and document the costs of a reclamation bond, if applicable.

Documentation is essential for proper administration and enforcement. Monitoring intensity varies in accordance with the complexity of the project being administered. Case files contain field exams, personal contacts, verbal and telephone conversations, e-mails, field notes and photos. District lands/minerals personnel are making a conscientious effort to properly administer their mineral operations.

Leasable Minerals (Coal and Oil and Gas)

The Paonia Ranger District administers surface operations related to three underground coal mines in cooperation with the Colorado Division of Reclamation Mining and Safety, the Office of Surface Mining and the BLM. The mining companies each have some level of exploration drilling, methane drainage well drilling/operations, ventilation shaft construction/operation, and other activities occurring continuously. The coal projects are designed to meet the Forest Plan standards and guidelines for the particular management area in which the project occurs. This includes designing reclamation needs to support what is called the post-mining land use. Further, the projects are designed to fulfill the FS obligation in the federal coal program to protect non-coal resources.

The District has an on-going field inspection program for coal-related projects. During the summer field season, these projects are inspected several times per week (or as needed depending on activity level) for compliance with the terms of approvals, which include road use and access, wildlife resource effects and reclamation progress, among other items. Inspection reports, findings, and follow up needed and photos are prepared and kept in the District project files. Although there are isolated instances of non-compliance with the terms of surface use approvals, the companies have generally responded in timely fashions to correct the situations. Contemporaneous reclamation practices on exploration and methane drainage drill sites functions well, as site stabilization and revegetation are generally achieved within one growing season after reclamation activities. Of particular concern in 2007 was the practice by one contracted drilling company to dump used oil into mud pits. The District worked with the State Division of Reclamation Mining and Safety to issue violation notices to the mining company, and ensure proper clean up occurred. Forest and District staff review resource monitoring reports submitted by the mining companies to ensure that the surface resources are protected, and that findings made in NEPA analyses are valid.

The District also administers on-going operations at twelve active natural gas wells, and three presently shut in wells. In 2007 re-drilling on existing well sites occurred at 4 of the locations, and new production equipment was placed on these locations. A buried water line was also installed between two of the well sites. On sites where active drilling occurs, the sites are inspected two or three times per week. For wells in production status, the well sites are inspected several times during the summer field season, and once during the winter. Items needing correction are sent to the operators after initial inspections, and follow up inspections are conducted to ensure corrections have been made.

During 2007, gas operators were advised about general site maintenance, noxious weed control, and need for road maintenance. Notices of non-compliance were sent to one operator .

The Grand Valley Ranger District administered six shut in (not producing) natural gas wells. During 2007, the operators were notified about general site maintenance, signing needs, noxious weed control and water monitoring requirements. Items needing correction were sent to the operators after initial inspections, and follow up inspections are conducted to ensure corrections have been made. One well was plugged and abandoned in 2007. The District worked with BLM to formulate site reclamation plans and oversaw site stabilization and reclamation activities.

The Forest fulfilled an obligation made in the DN/FONSI for the Spaulding Peak AWP (July 2006) to conduct validation monitoring on ground-water resources in the vicinity of the Leon Lake 5 gas well. Through an interagency agreement with USGS, water chemistry was collected from a ground-water monitoring well and Surface Creek from September 2006 through August 2007. The water chemistry included sampling for isotopes in the water to assess recharge source and residence time of the ground water. USGS initial interpretation is that ground water in the area has been in the ground water system for between 24 and 55 years, and confirmed that the principal recharge mechanism is snowmelt. These results support the Forests findings made in the Spaulding Peak EA.

13. Transportation System

Are newly constructed local roads closed? If not, is reason documented?

All local roads require a Road Management Objective worksheet (RMO) as part the process of implementing decisions made through the NEPA process. The RMO reflects the short and long management goals for the road and displays whether or not the road should remain opened or be closed after the Forest land management activity is completed.

In FY2007 2.30 new road miles were constructed. Of the 2.3 miles, 1.0 miles were constructed by non-FS funds and 1.3 miles by appropriated funds. 1.3 miles of new roads were constructed in order to support Timber Sale harvest activities. Approximately 24.2 miles of road were improved in FY2007.

The Forest decommissioned 45.6 miles of unauthorized routes. And 29.7 miles of system routes were decommissioned at the end of the year using non-FS funds and deleted from the system. Eighty percent of the roads decommissioned were scarified and seeded as part of the process to bring the land back into natural production. The remaining twenty percent were closed using informational signing and natural barricades.

Also, 216 miles of road were treated for noxious weeds.

Coal mine operators constructed about 1.0 miles of single use road to access surface operations that support the underground mines. Public motorized use on these road is prohibited. These temporary roads are decommissioned when no longer needed for the specific project.

Are we meeting standards and guidelines rehabilitation of temporary roads?

With the sharp reduction in timber harvest contracts, temporary roads have been reduced significantly. Temporary roads have been replaced with skid trails. When specified in a contract or part of the permit (lease) plan, rehabilitation of temporary roads is very successful. The rehabilitation is most effective if the road entrance is re-contoured and entrance discouragement techniques are utilized. Successful

techniques in discouraging road use include positioning of selected trees at the entrance and placing slash in the roadway. The recent work on the Paonia, Norwood and Grand Valley Ranger Districts are excellent examples of rehabilitation.

Are we meeting standards for non-use of obliterated roads?

During FY2007 the Forest District Road Engineers monitored the effectiveness of road obliteration. If obliteration is attempted more than a year after a road's initial construction, a permanent closure is increasingly difficult to implement with each year of public use. Observations in the field indicated that hunting season shows the greatest effect of people wanting to use closed routes. Motorized and mechanized (mountain bikes) users do go around barriers and do keep closed routes "open." This has been part of the clear need responded to in recent and upcoming travel planning efforts.

Apparent use of unauthorized routes is substantial on the Paonia district, and new routes are located often. Most closures appear to be functioning, with several exceptions. Most off-road use appears to be hunting-related and occurs between the start of archery season and closure of areas due to snowfall.

B. Effectiveness Monitoring

Is Forest Plan direction effective in achieving Forest Plan goals?

1. Riparian

Are vegetative treatments providing desired results?

Monitoring observations indicate that our riparian areas are healthier now than in the past. Vegetative measurements, photo points, and ocular observations reveal improved bank stability, denser vegetation, and cleaner streambeds. For several years, monitoring of streams using Properly Functioning Condition methodology has assessed the basic physical and hydrological characteristics of stream channels. The majority of streams checked are properly functioning.

Are we reaching the upper mid-seral stage in riparian areas? How does this relate to aquatic habitat condition?

Surveys associated with project analysis indicate that riparian condition has improved in recent years and appears to continue in an upward trend. As riparian condition improves, we expect to see a corresponding improvement in aquatic habitat, but no studies have been conducted to date which correlate seral stage to aquatic habitat condition.

2. Range

Are forage utilization standards realistic and achieving the intended objectives?

The GMUG has been using the Rocky Mountain Region Rangeland Analysis and Management Training Guide to supplement and enhance standards and guidelines in the Forest Plan for several years. This guide identifies several methods for rangeland monitoring, including production/utilization; stubble height; ocular methods; grazing response index; and line transects, such as rooted nested frequency and cover frequency. Using these methodologies our observation is that in most cases, shorter duration grazing periods and managing for plant growth and re-growth as well as

intensity and frequency of grazing provide better measures of sustainable forage use and rangeland health than utilization standards alone. Based on these observations, we expect to add additional monitoring guidelines in the upcoming Forest Plan revision.

3. Water

Is implementation of the 9A prescription preventing non-point sources of sediment and meeting Colorado Best Management Practices?

Non-point source sediment pollution is not 100% preventable when considered in the context of land management disturbance activities distributed over a range of climatic, geologic and topographic conditions. It is very difficult to separate sediment contributions related to natural watershed processes from that contributed by human activities.

We have been successful in our efforts to incorporate and implement best management practices into all facets of activity on the National Forest. However, our ability to monitor the effectiveness of those practices is limited by funding, staffing and the difficulty associated with conducting meaningful sediment monitoring.

Overall the quality of the water on the Forest is considered to be excellent. It is our observation that the constraints imposed by the 9A Management Direction do effectively protect streams, water quality and fisheries habitat. The Colorado Department of Public Health and Environment has identified eleven segments of streams as impaired [303(d) listed] that are within or cross lands administered by the GMUG National Forest. . All of these streams are listed due to heavy metals contamination from historical mining activities. While the State has not yet initiated development of TMDL (total maximum daily load) plans, there are several abandon mine land reclamation projects underway. The Forest has two active CERCLA projects. One is on a tributary to Coal Creek, near Crested Butte, CO., and the second is on Howard's Fork, near Ophir, CO.

During FY07 restoration projects were completed on 46 acres, which are intended to improve watershed health. These restoration activities were directed at road maintenance and decommissioning; stream channel restoration; closure of riparian dispersed camp sites,; and abandoned mine cleanup. The Forest is experiencing a decline in funding available for restoration treatments. This will significantly impact outputs. A similar decline in Engineering funds will also have ramifications in the ability to correct existing projects or, in the case of road maintenance, prevent problems from developing.

Are water yield increases causing channel and resource (fisheries) damage?

There is no evidence that our channels are being adversely impacted by increased water yields. Timber harvesting does have the capability of increasing water yields, however research has demonstrated that significant water yield increases require removal of 25 to 30% of the basal area within a forested watershed. Over the last decade, reduced timber sale activities, in combination with hydrologic recovery of older cutting units, has resulted in all of our forested watersheds being far below the 25 to 30% threshold.

Water yields associated with snowmaking and trail clearing at ski area operations has the potential to cause channel destabilization on steep 1st and 2nd order streams. In FY07 a representative number of

headwater channels on the Crested Butte Ski Area were investigated to determine if land use and activities were degrading those systems. Some impacts associated with roads and trails in close proximity to drainages features were noted, however there was no evidence which indicated that water yields or snowmaking were adversely impacting the streams. Monitoring from previous years at other ski areas on the Forest has indicated that channel degradation is primarily a concern in channels where course substrate and large wood are missing. The Forest is working with the ski industry to identify these problem areas and design appropriate stabilization/restoration.

4. Fire

Is our fire program cost effective?

The Forest fire program, due to budget reductions, was at less than 40% MEL in FY04. The Regional Office was able to secure some supplemental funding which allowed the Forest to fully staff all engines at the FY03 level. This allowed the Forest to still maintain the management oversight with the FMO, AFMO, and dispatch services but reduced the Production capabilities from 5 fully staffed (5 persons) Type 6 engines, 7-day coverage, to 3-person staffing and 5-day coverage. However, 7-day coverage was still provided with the use of BLM engines, but not all engines were staffed all 7 days but were available for dispatch if needed. All engines were properly staffed with an Engine and a Assistant Engine Foreman which provided proper supervision. There was one dispatch vacancy in the Grand Junction Interagency Dispatch Office that was filled. Direction from the Regional Office stated that the Units were to maintain IA preparedness to protect life and property commensurate with both fire danger and the national situation. The Forest was expected to pay salary and related expenses necessary to protect life and property. All other expenditures not meeting this mission were deferred. The Forest did this when possible and maximized every opportunity to work preparedness personnel on WFHF (hazardous fuels) projects while still being available for suppression.

The Montrose Interagency Fire Management Unit experienced a return to a more average fire season in 2007. While the drought has not ended, a good winter snow pack delayed the start of fire season, and allowed reservoirs to begin filling again. Most fires were small but low fuel moistures at site specific locations combined with dry windy conditions allowed for two large acreage lightning-caused fires to burn in June and July.

There was no fire restrictions imposed on federal lands within the unit, which was the first time in several years that conditions had been moderate enough to warrant unrestricted campfires. Press releases advised the public to continue to use fire carefully. Gunnison County implemented a new fire reporting system for agricultural and debris burning with an emphasis on tracking burn activity, and restricting burning on dangerous fire weather days. This was a highly successful program that resulted in fewer escaped fires, and reduced the number of unnecessary fire department responses and assists from the Federal Agency fire resources.

The McGruder fire involved wildland and urban interface near the town of Cedaredge, and a Rocky Mountain Area Type 2 (Mullenix) Incident Management Team (IMT) was mobilized. This multi-jurisdictional fire involved BLM, USFS, and private lands, and provided an excellent opportunity for the local community and county organization to interact with the IMT to meet incident objectives and maintain cost constraints. The team was then reassigned to the Saddle Mountain fire, which was a smaller incident, but had increased complexity due to inaccessible terrain and significant aerial resource commitment.

There were three Type 3 incidents (Firebox, Tappan, and Campbell) which the Campbell fire was the most challenging (2,865 acres burned on Forest Service land). The remaining acreage on Campbell and the other Type 3 incidents were all BLM land but support to these fires was provided by Forest Service resources. For the Campbell fire a Type 3 IMT (Richardson) was mobilized utilizing interagency resources from across the unit, and incident objectives were met and safety enhanced by implementing a confinement strategy. This resulted in significant cost savings over a traditional contain/control suppression response, and allowed the Type 3 team to develop additional organizational skills and operational experience.

The unit also provided resources to support the lengthy fire season in Alaska, and mobilized personnel to the Pacific Northwest and California during the peak of their fire activity. Additional unit resources responded to support the multiple hurricane relief efforts that FEMA managed in Florida.

The Forest ended up with 61 reportable fires for a total of 3,575.6 acres burned (51 lightning fires for 3,301.65 acres burned; and 10 human-caused fires for 273.95 acres burned).

Currently data for NFMAS and FUELS out-year planning for FY05 and FY06 is being gathered.

This is the ninth year that the Forest has operated under a unified budget process. The percent of Indirect costs of both WFPR and WFHF was substantially higher than in previous years therefore allowing less program dollars to the ground and to be able to operate efficiently as directed.

Are fuel treatments effectively meeting habitat improvement and fire suppression objectives?

The Fuels Management program on the GMUG continues to increase. The WFHF accomplishment included 7,232 acres of WUI (3,236 acres of prescribed burning; and 3,996 of mechanical treatment) and 4,029 acres of non-WUI (2,691 acres of prescribed burning and 1,338 acres of mechanical treatment) for a total accomplishment of 11,261 acres treated. All accomplishments by Project and treatment type are recorded in the National Fire Plan Operations and Reporting System (NFPORS). Given ongoing changes in the fire management organization, our skills base will continue to grow also. By jointly managing the fire management program with the BLM, the Forest is better able to share expertise and conduct burns needed to meet Wildland Urban Interface and ecological objectives.

Using the NFPORS database the Forest also kept track of other non-fuel (WFHF) funded projects that contributed to either change or improvement of Condition Class. In NFTM there were 659 acres of WUI and 533 acres of non-WUI, all mechanical treatment. In KV there were 198 acres of WUI prescribed burning. In SSSS there were 205 acres of WUI and 197 acres of non-WUI, all mechanical treatment. In NFWF there were 741 acres of WUI and 625 acres of non-WUI, all mechanical treatment. In RBRB there were 1000 acres of WUI and 223 acres of non-WUI, all mechanical treatment. A total of 2,803 acres WUI and 1,578 acres non-WUI for a grand total of 4,381 acres were treated.

All burn plans are current or have been revised to meet Forest Plan and policy direction and standards.

National direction is working to increase fuels treatment while maintaining the pre-suppression program. By increasing the fuel treatment program it is hoped that there will be a measurable reduction in wildfire intensity in the future. The Forest's Accelerated Watershed/Vegetation Restoration Plan (AWRP) is to program for 8000 acres of hazardous fuels treatment in FY04-06;

increase to 10,000 acres over the FY07-09 period and eventually increase to 12,000 acres for FY10-14. Efforts are to continue to concentrate on areas of Communities at risk (identified as Wildland Urban Interface (WUI)); Watersheds at risk; and Threatened and endangered areas.

5. Air

Is the Forest effectively complying with state air quality standards for prescribed burning?

The GMUG is required to apply for state burning permits for all prescribed fire planned or envisioned. The Colorado Air Pollution Control Division reviews all permits for compliance with permit standards. New standards have been developed and implemented of the Forest. Several permits were restricted to the types for burning to conduct. A total of 7,430 acres were prescribed burned on the Forest. All of these burns, conducted in 2005, were within smoke compliance guides as established in the burning permits.

Smoke plumes are monitored on site by the burn boss, and at times off-site by others to check drift into sensitive areas. No adverse reports were received.

The current Forest Plan does not address the issues of climate change, which in part are related to air resources. Nationally the Forest Service is developing a framework designed to address the effects of climate change on National Forest resources as well as how our activities conducted on NFS lands can influence climate change. This topic needs to be addressed in our plan revision.

6. Insects and Disease

Are our treatment activities effectively reducing or preventing increases in insects and diseases?

The primary tool for the treatment and management of areas affected by forest insects and disease is timber harvest. Reduced levels of harvest on this Forest have essentially resulted in the loss of a program for treating or reducing insects and disease. Natural forces except fire are predominant in forest stands across most of the GMUG, a part of these forces being the replacement of tree stands through loss to age, insects and disease. Trade offs include the preservation of these same stands from the impacts of timber harvest, including road building, and the gradual shift of forest structure to older aged stands of trees. This leaves large areas more susceptible to outbreak of insect and disease (as well as to catastrophic fire). This trend is expected to continue.

Aerial surveys for insect and disease damage were completed in 2005. The flight covered the entire forest. An aerial survey was also conducted in October of 2007 focusing on the forest-wide impacts from Sudden Aspen Decline.

Some specific effects observed from these (and previous year) surveys include:

- Dwarf mistletoe of lodgepole pine continues to be severe in the Taylor Park area of the Gunnison.
- Spruce beetle activity continues to affect the Grand Mesa, the Uncompahgre Plateau and the High Mesa and Telluride Ski Area in the San Juan Mountains.

- Incidence of Armillaria root disease remains high in spruce-fir stands, particularly on the Grand Mesa. Susceptibility to this pathogen is also age-related. Older stands will continue to be vulnerable. This disease may contribute to windthrow, increased mortality and spruce beetle.
- Mountain pine beetle-caused mortality is continuing in ponderosa pine on the Uncompahgre Plateau, near Campbell Point and in Haley Draw. Mountain pine beetle-caused mortality in lodgepole pine is occurring in Taylor Canyon, East of Taylor Park, near Ohio City, and scattered from US Highway 50 southwest to CO Highway 114.
- Douglas-fir beetle activity has been increasing wherever Douglas-fir occurs. Areas observed from past-year surveys include the Flatirons, Coal Creek and Anthracite Creek on the Paonia District. Areas affected on the Gunnison District include: Taylor Canyon, areas from Sargents to Archuleta Creek, areas south of the West Elk Wilderness in Curecanti Creek, Soap Creek, East Red Creek and Beaver Creek, and along the Lake Fork.
- Western spruce budworm defoliation of Douglas-fir and true fir is severe on the Uncompahgre Plateau. Activity also continues in the Lake Fork drainage near Lake City.
- Sudden Aspen Decline (SAD) is causing wide-spread mortality at the lower elevations (of the species range) across the forest. A study was initiated in 2007 to determine the cause of the sudden decline of aspen.

Treatments to regenerate aspen on sites affected by SAD will be initiated in 2008 through the commercial timber sales program. Funding has also been requested for 2008 to non-commercially treat some affected sites.

The small sales timber program continues to be concentrated in areas with insect and/or disease activity, in an attempt to minimize the effects. Harvest activities will continue to make a small impact on insect activity in high visibility areas and as other opportunities arise, but the overall forest health will continue to decline as mortality increases over the general forested area as a result of insect and disease activity in combination with aging trees.

7. Soils

Are standards and guidelines effective in maintaining soil productivity?

The effectiveness of our efforts to maintain or enhance soil productivity was monitored in a number of ways on a number of situations. This ranged from observations of soil conditions on a slope failure of a ski slope on the Powder Horn ski area, a review of winter logging activities on the Porter Mountain Aspen timber sale, a field documentation of vegetative recovery of various large fires the Forest has experienced over the last decade, to continued monitoring of Wetland/Fen conditions within the Telluride Ski Area. Some findings include:

Slope Failure

A slope failure was reviewed in the vicinity of Harold way run. This is an area that has been disturbed over the years. It had become saturated during snow melt, and failed as a blow-out or slump. This occurred even though the mitigation of removing snow from this area of localized instability had been

cared out. It was recommended that more interceptor drains be installed up slope to catch and drain this slope before it gets down to these weaker reconstructed areas.

Winter Logging activities on the Porter Mountain Aspen Sale Area:

A review of the affects of winter logging activities on the soil resource occurred in February 2007. At the time that the observations were made there was 17 inches of snow on the ground. Various skid trails were examined with the depth of packed snow ranging from 11-13 inches. Soil temperatures ranged from 29.8 degrees F to 32 degrees F . No deep ruts were observed during this observation. It was estimated that at the site of these observations no detrimental rutting/ compaction/displacement or erosion was occurring as a result of these logging activities during this period of time.

Vegetative Recovery of past Fires

A report has been compiled and produced as a draft by Barry Johnston that documents the various vegetative conditions and ecosystem recoveries on nine fires that have occurred on the Forest dating back to the early 1990's. He has set up permanent plot points and photo points, so observations can be made in the same locations in future years. He has made observation on amounts of runoff and erosion also. The report is titled "Report on Conditions of Select Wildfires in the Western Uncompahgre Plateau and Surrounding Areas. Draft Report, March 2007."

Wetland/ Fen Monitoring in relation to Ski Area expansion activities in the Prospect Basin area of the Telluride Ski area.

The monitoring of the Fens within prospect basin that has been mentioned in this document over the years has been mostly completed and a final report is being prepared by Dr. Cooper. Preliminary findings indicate some affects on the Fen vegetation as a result of compacted snow conditions relating to grooming and use of the ski runs located over the fens.

A spin-off study and report has been produced Titled "Final Report: Regional Assessment of Fen Distribution, Condition and Restoration Needs, San Juan Mountains, Colorado. By Chimner, Lemly, Cooper and Northcott.", which was produced in cooperation with the Mountain Studies Institute and an EPA grant to inventory Fens and develop a way to assess the condition and impact to Fens. This study covers the Southern Portion of the Uncompahgre National Forest.

8. Transportation System

Is travel management effectively implemented to accomplish resource objectives? Travel management components are 1) roads; 2) trails; and 3) areas?

Currently, the Forest has three Travel Plans, Grand Mesa (1994), Uncompahgre (March 2002) and the Interim Gunnison (April 2001). In FY2007 small advances in the implementation of the three travel plans were made on the Forest. . The Forest performed minimal custodial activity (fixing existing signs, replacing stolen/missing signs) during the year. Several seasonal road gates were installed on the Uncompahgre Plateau. The Norwood R.D. still is the farthest behind in implementation.

The Forest published Two Motor Vehicle Use Maps (MVUM) for the Grand Mesa and Uncompahgre National forest in July and September. The MVUM are required to be published annually as part of the new Travel Rule in 36 CFR 212. The MVUM displays the uses are allowed on the routes designated.

Funding of Travel Management continues to be very difficult because of the financial constraints placed upon the Forest Service. Only road and trail maintenance dollars can be used to implement TM implementation in an already marginally funded programs.

How much and what type of recreation opportunity is being provided?

A wide variety of recreation opportunities are provided on the Forest ranging from urban developed recreation opportunities to wilderness primitive opportunities. Opportunities exist within all categories of the recreation opportunity spectrum (ROS). Those on the lower development spectrum such as semi-primitive, motorized and semi-primitive, nonmotorized are diminishing as a result of other Forest management activities, new route development and increased recreation demands.

C. Validation Monitoring

Do assumptions used in developing the Forest Plan remain valid?

1. Riparian

Is the upper mid-seral stage providing adequate protection for aquatic habitat quality?

Generally speaking, the upper mid-seral standard is providing adequate protection and improvement for riparian areas and attendant aquatic conditions.

2. Timber

Is data used in FORPLAN accurate?

The yield projection discussion expressed in previous Monitoring Reports continues to be moot in that the offer and harvest levels are significantly below Forest Plan projections and Allowable Sale Quantity. Yield projections will be evaluated again during Forest Plan revision.

The Forest continues to rebuild the backlog of environmental documentation to provide a stable timber program. Therefore, the overall timber program financial efficiency remains at a decreased level due to the extensive work on environmental documentation.

3. Facilities

Are road costs accurate?

Yes, however the average road costs have increased annually at a rate of 10 percent per year. The average reconstruction for a timber sale road is \$30,000 per mile for a native surfaced road in moderate terrain. The average cost for reconstruction is about \$18,000 per mile per lane native surface road. For aggregate surfaced roads are nearly \$60,000 per lane mile. Road costs are dependent to the geographic location (Telluride-Crested Butte), topography, soil type, and availability of materials for construction (i.e., aggregate). When silt fences and armoring road dips with rock are added to the road construction package, cost rise significantly. The added costs increase the road construction costs by 20 percent.

ACTION PLAN

As explained in the cover page of this report, Forest Plan revision is underway. The Forest has completed comprehensive resource assessments and evaluations that describe scientific and technical information about social, economic, and ecological conditions, as well as numerous collaborative public involvement efforts. The planning team, working with federal and state agencies, local governments, communities, and individual stakeholders, considered this and other information related to changes in laws, regulations and policies, in developing the Proposed Plan.

Versions of the Proposed Plan were developed by synthesizing technical analyses results with public input. The planning team conducted numerous meetings, presented key findings and trends from assessments and evaluations, and the preliminary Proposed Plans that incorporated public recommendations. Relevant documents are available for review on the GMUG internet site (www.fs.fed.us/r2/gmug/policy/plan_rev/).

Should legal issues concerning the agency's planning rule be cleared up early in 2008, we hope to have an official version of the Proposed Plan available for public review later in the year.

RESEARCH NEEDS

No additional research needs were identified through this report.

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PUBLIC PARTICIPATION/ DISCLOSURE

This report has been made available on the FS Web at the following web address:

<http://www.fs.fed.us/r2/gmug/policy/>

It is also printed in hard copy, and may be obtained by request to Forest Planner, GMUG National Forest, 2250 Highway 50, Delta, Colorado 81416.