Carson National Forest
Southwestern Region

Carson Forest Plan Monitoring and Evaluation Report

Fiscal Year 1999

1

Forest Supervisor Certification of Forest Plan Sufficiency

The Carson Forest Plan is sufficient to guide management of the Forest over the next year. There are improvements that can be made as outlined in the recommendations section and will be scheduled as funding and personnel are available in FY 99.

/s/ *Gilbert Vigil* *March 2000*

GILBERT VIGIL Date
Forest Supervisor

2

Summary of Monitoring Activities

On the Carson, we have been taking a close look at how we initiate a proposal, take it through the NEPA process, and implement it on the ground. By monitoring the NEPA assessment process and how the Forest Plan is used in project design and implementation, we have found that emphasis has been on project implementation, rather than what we are trying to really accomplish. This is partly due to the general descriptions of desired conditions (DC) found in the Forest Plan.

Through the ecosystem analysis process implemented on three ranger districts (Camino Real, Canjilon and El Rito), the districts are coming up with descriptions of desired conditions that are more detailed, and still under the umbrella of the Forest Plan's goals and objectives. A common understanding of what is the DC (or goal) provides those who design projects a better idea of what the outcome of the project should be -- what is the project really trying to accomplish? This ecosystem analysis process includes specific DC descriptions encompassing all natural resources, as well as, integrating the social aspects of the ecosystem. It is accomplished in a holistic manner focusing totally on conditions that we want to create.

When a proposed action is initiated, the existing and desired conditions are well defined, so we know where we are and where we want to go. It is much easier to work with the public when we ourselves have a better understanding of what we want to achieve. The result is projects with a sound and focused purpose and need. When the public understands what we are doing and why, they are supportive. Focusing on the DC also forces us to look further into the future, examining more closely the consequences of our actions.

The following is a list of various monitoring activities that are either the prerequisite to being able to do something on the ground (we need to better define our existing condition) or a result of actions taken (how close has it taken us toward our desired condition). We used to concentrate

primarily on *implementation monitoring* -- did we get the job done that we said we would do? Now we are finding that we are doing more *effectiveness monitoring* -- is the action doing what we said it would do? Are we heading toward our desired condition? This change in what we are monitoring is the direct result of changing our emphasis from project implementation to what conditions we want to reach.

Baseline/Inventory Monitoring

- A summary of status and habitat trends of 44 management indicator species (MIS) identified in the Carson Forest Plan (including all listed threatened, endangered and sensitive species thought to occur on the Forest by the US Fish and Wildlife Service) was initiated in FY 1999. Biologists on the Forest pooled their resources, providing MIS information from each district. Additional resources, literature and data bases are being used to compile this report, which should be completed by June, 2000. Its purpose is to provide an overall status of MIS and their habitats on the Carson National Forest and also rationalization for removing some of these species from the Forest Plan MIS list.

- Threatened, endangered and sensitive (TE&S) species are surveyed for project and program monitoring requirements (e.g., 1996 region-wide Amendment for Forest Plans), as well as, to provide planning information during project analysis. Monitoring is ongoing (7,380 acres in FY 99) for the any TE&S species located on the Forest. The primary species inventoried and monitored (if found) on the Carson are southwestern willow flycatcher, northern goshawk, American peregrine falcon, bald eagle and Mexican spotted owl. This type of inventory and monitoring provide the biologists information on the occurrence of TE&S species on the Forest, as well as, whether management activities (e.g., grazing, recreation, tree cutting, etc.) are a threat to a species' habitat or existence. Supporting documentation is located at each of the ranger stations.

- Annual counts of the recently (1994) reintroduced bighorn sheep population in the Wheeler Peak Wilderness Area are conducted. This monitoring is conducted in cooperation with the New Mexico Department of Game and Fish (NMGF) to determine the herd's reproductive and adaptive success. Currently, there are in excess of 80 sheep in the Wheeler Peak or Columbine/Hondo areas. They have been successfully reproducing for the past six years. Evaluation as to whether some of the population should be transplanted to another location is still in the future. The target population for these areas is

between 125 and 150 animals. Supporting documentation is located at the Questa ranger station.

- Annual counts are made of the elk herd in the San Antonio Mountain area. In cooperation with the New Mexico Department of Game and Fish, approximately 100,000 acres were aerially inventoried in FY 99 to determine the herd's reproductive and adaptive success. Supporting documentation for elk aerial monitoring is located at the Tres Piedras ranger station.

- Baseline inventory and monitoring of Rio Grande cutthroat trout (RGCT) populations are ongoing throughout the Carson NF. The surveys are performed using the three pass regression method and population estimates are calculated from the regression. Samples from populations are also collected for genetic analysis. These surveys are ongoing and help determine the level of management appropriate for the population. Supporting documentation is located at the Forest Supervisor's office.

- Wild trout populations and macroinvertebrates are also surveyed and monitored on the Carson NF. Supporting documentation is located at the Forest Supervisor's office.

- Analysis of the thermograph studies taken on Comanche Creek and its tributaries (Questa Ranger District) in 1998 is still being made. The water temperature data will provide information on fish habitat condition. Supporting documentation is located at the Forest Supervisor's office.

- Point count transects for neotropical migratory birds (NTMBs) are accomplished annually (460 acres in FY 99) on the Camino Real, Canjilon, El Rito and Tres Piedras ranger districts. Each transect is run several times during the summer. These counts provide trend data of NTMB migrations, as well as, the increase in the cowbird population in southwestern flycatcher habitat. Supporting documentation is located at the Forest Supervisor's office.

- Although surveys to locate populations of the Arizona willow have been done in previous years, no surveys were performed on the Forest in 1999. During the installation of a fish barrier, one plant was identified on Comanche Creek within an elk exclosure. Work is being done on Questa Ranger District in order to protect this sensitive species. The Arizona willow has not been found on any other districts.

- Road conditions are also monitored by district personnel and the public on an annual basis. Condition surveys contain the necessary

documentation to plan for maintenance, closures and obliteration. Many times, comments are received from the public on the effectiveness of road closures. Limited enforcement has resulted in more frequent road closure violations on the Forest. Supporting documentation is located at either the ranger stations or the Forest Supervisor's office.

- As a part of the *Deferred Maintenance* program, an inventory of the entire Carson NF was performed on level 3 and 4 roads. Over 600 miles of road were inventoried, documenting conditions of road surface, drainage, sight distance and proper signing. In FY 2000, it is planned that all level 1 and 2 roads will be inventoried. Over 5,000 miles of road still need to be surveyed over the next few years. This information will provide a Forest-wide view of the transportation system and its condition and what roads need to be upgraded, maintained or decommissioned. Supporting documentation is located at the Forest Supervisor's office.

- Customer satisfaction on how well we are managing the Forest is monitored through evaluation cards, newspaper articles and comments from recreation fee envelopes and walk-in visitors. These comments provide input on the conditions of developed recreation sites, the presence of user conflicts and public safety problems. Supporting documentation is located at each ranger station or in the Forest Supervisor's office.

- Developed campgrounds and picnic areas are monitored at least on a weekly basis during the summer months by Forest Service law enforcement, district personnel, campground hosts and/or concessionaires, as well as, through cooperative agreements with state and county law enforcement. These comments provide input on the conditions of developed recreation sites, the presence of user conflicts and public safety problems. Supporting documentation is located at each ranger station or in the Forest Supervisor's office.

- Taos Ski Valley (TSV) and Red River Ski Area (RRSA) operations are monitored at least once a week during the winter by the Questa snow ranger. Sipapu Ski Area operations are monitored at least once a month. Site inspections by Forest Service lift engineers are made at least once a season at each ski area. Supporting documentation for monitoring operations at TSV and RRSA is located at the Questa ranger station and at each ski area. Supporting documentation for monitoring operations at Sipapu is located at the Camino Real ranger station and at Sipapu. Supporting documentation of lift inspections is located at the Southwestern Regional office in Albuquerque.

- Facility, road, bridge and dam maintenance monitoring is ongoing, although minimal. It is of a reactive nature, rather than a proactive one. Supporting documentation is located at the Forest Supervisor's office.

- Wilderness patrols are performed by volunteers and/or recreation specialists several times during a summer. Patrols include inspections of trail conditions, dispersed camping areas and outfitter/guide permit use. During 1999, a Meaningful Measures trail inventory was performed on the Pecos and Wheeler Peak wilderness areas. Regular patrols are becoming more infrequent as the number of district employees are reduced each year. Supporting documentation is located at each ranger station.

- A study on the Tres Piedras Ranger District was conducted to determine eligibility of river and stream sections for incorporation into the National Wild and Scenic River system. Eligibility studies for the entire Carson NF will be completed by the end of FY 2000. Supporting documentation is located at the Forest Supervisor's office.

- Baseline and existing condition information (primarily turbidity) are being collected in cooperation with the New Mexico Environment Department (NMED) for several creeks on the Tres Piedras Ranger District. Collected information will help determine whether these reaches should be removed from the State's 305b list for non-attainment. Supporting documentation is located at the Tres Piedras ranger station.

- In 1999, NMED determined total maximum daily load (TMDL) for the North Ponil Creek on the Questa Ranger District. Section 303(d) of the federal Clean Water Act requires states to develop TMDL management plans for water bodies determined to be water quality limited. Monitoring of water temperature (thermographs) was used to help determine the TMDL. A general implementation plan for rehabilitation activities to be established in the watershed is included in the NMED report. This report is located at the Forest Supervisor's office.

- Also in 1999, NMED conducted TMDL characterization and monitoring on the Rio Chama and Red River. There is an increasing focus on the Red River watershed, due to the potential for the Molycorp mine to be listed as a superfund site.

- NMED also conducted water quality surveys on the Cimarron River Basin, including the North Ponil Creek on the Carson NF. NMED found that the North Ponil exceeded State water quality standards for

turbidity and total phosphorus. Also a level of stream bottom deposits and embeddedness were found to contribute to the reach's impairment. This NMED report is located at the Forest Supervisor's office.

- Identification of existing and potential non-point source water pollution on the Carson is ongoing and helps determine where watershed work would provide the most significant results. For example: The impacts of major rainstorm events in critical locations have been documented through turbidity sampling and photography on the Camino Real Ranger District.

  In early spring 1999, rainstorm events on top of snow were monitored on the Rio Chiquito, Rio Grande del Rancho, Pot Creek, Rio Pueblo and La Presa. As expected, elevated turbidity readings were documented in highly roaded areas on and off the National Forest. Supporting documentation is located at the Forest Supervisor's office.

- A *Draft Removal Preliminary Assessment* (RPA) was completed for Bitter, Pioneer and Placer subwatersheds, three tributaries of the Red River on the Questa Ranger District. The report assesses if there are any potentially hazardous substances generated from the 30 or so abandoned or inactive mines present on National Forest lands in the three drainages. The objective of the RPA investigation is to collect readily available information and conduct a site and environs reconnaissance to determine if the site poses any threat to human health and the environment that may require further investigation. Impacts suspected or observed include acid rock drainage from abandoned adits and tailings and water quality and aquatic habitat degradation from metals and sedimentation. This assessment is located at the Forest Supervisor's office.

- Water samples are taken from all campground and Forest Service administrative buildings once a month. Due to not meeting State potable water quality standards, La Vinateria spring up Taos Canyon was closed to public use in 1999. Supporting documentation is located at the Forest Supervisor's office.

- For almost 20 years, air quality monitoring for the Wheeler Peak Wilderness Area has been collected using photo comparisons from a camera permanently mounted near Tres Piedras. Data summaries are filed at the Forest Supervisor's office.

- All communities adjacent to the Carson National Forest have been mapped for fire risk, thus focusing fuels reduction projects in areas

where the fire risk is the greatest. Supporting documentation is located at the Forest Supervisor's office.

- Aerial insect and disease surveys of the Forest are conducted annually. Supporting documentation is located at the Southwestern Regional office.

- Vegetation data are being collected on each ranger district. This information is being used to determine existing conditions for wildland urban interface and forest health projects, salvage sales, Mexican spotted owl thresholds and old growth at the landscape level, and Forest Plan Revision preparation. Vegetation conditions are recorded on maps and tracked in the RMRIS database and GIS. Photo history is also used to document changes in vegetation composition, structure and health. Much of this data determines where management activities are needed on the Forest to help reach a desired condition. Supporting documentation is located at the ranger stations and the Forest Supervisor's office.

- The amount of timber and wood products offered each year are documented through the Periodic Timber Sale Accounting Report (PTSAR) located at the Forest Supervisor's office.

- Program oversight and quality control are provided by the Forest archeologist by reviewing all heritage resource clearances. The purpose of this type of monitoring is to gain overall knowledge of new sites found on the Forest and the course of action taken to protect them. Supporting documentation is located at either the ranger stations or the Forest Supervisor's office.

Implementation Monitoring

- Sikes Act projects, such as prescribed burning to improve the quality of habitat, are monitored after completion and continue over several years. Areas are visited to check implementation work, take photos and document project effectiveness. The NM Department of Game and Fish is a partner in Sikes Act project implementation monitoring and whether predicted results have been met. Supporting documentation is located at the Forest Supervisor's office.

- Recreation facility construction projects include reviews to ensure contract work meets specifications, environmental assessment requirements, and to monitor how well the design meets user needs. Such reviews have been performed at the Echo Amphitheater Picnic

Area and Hopewell Lake Campground. Supporting documentation is located at the Forest Supervisor's office.

- Periodic field visits to project areas by sale administrators, specialists and/or line officers usually result in informal monitoring and evaluation of the application of best management practices or actions needed. Documentation is captured through specialist notes, sale administration inspection reports and/or photo points located at the ranger stations.

- Fuelwood monitoring includes field checking for "leave" trees and assessing how the public is harvesting. Monitoring information is considered when determining cleanup efforts needed for fuelwood areas. Cleanup efforts are also monitored. Recommendations and actions are normally documented and are located at the ranger stations.

- Precommercial thinning and salvage sale activities include post-sale inspections. Areas are examined to ensure contract requirements are met and results are documented in the RMRIS database. Supporting documentation is located at each of the ranger stations.

- Forage utilization is monitored periodically in grazing allotment pastures to determine whether overutilization is occurring. Supporting documentation is located at each of the ranger stations.

- Range readiness is monitored on an annual basis to determine the time livestock can be released onto an allotment pasture. Current drought conditions have resulted in later than normal turn-outs. Supporting documentation is located at each of the ranger stations.

- Archeological and heritage surveys are completed prior to the implementation of any ground disturbing proposals to assure protection or mitigation of cultural and/or historic sites. Supporting documentation is located at the Forest Supervisor's office.

Effectiveness Monitoring

- The Mexican spotted owl (MSO) recovery plan specifically requires microhabitat monitoring to demonstrate that habitat across the range is stable or increasing. A protocol for implementation monitoring of MSO microhabitat was established and is being followed by the Carson NF. According to protocol, 25 plots were established and monitored in FY 99. These plots were mostly located in areas where fuelwood and precommercial thinning were implemented to improve forest health by

reducing tree density. Supporting documentation is located at the Camino Real, El Rito and Tres Piedras ranger stations.

- Road obliteration is monitored for effectiveness. Much of the monitoring is done on an informal basis by district personnel and observations from the public. Information and public feedback is evaluated, and changes to closure or obliteration techniques are determined. Supporting documentation is located at each of the ranger stations.

- Prescribed fire treatments are monitored through on-site visits. Usually "before and after" photos are taken for burn projects to determine whether the anticipated objectives have been attained (i.e., has the palatability of the oak browse noticeably improved?). Recommendations and follow-up actions are determined. Supporting documentation is located at each of the ranger stations.

- Vegetation treatments on the Tres Piedras and El Rito ranger districts receive post-treatment monitoring by the Forest silviculturalist to assess their effectiveness. Supporting documentation is located at the Tres Piedras ranger station.

- Areas of natural regeneration are inspected by the Forest silviculturalist for rate of success. Supporting documentation is located at the Tres Piedras ranger station.

- Numerous public field trips are taken each year on the Carson to areas where projects have been implemented. These trips result in informal monitoring of the effectiveness of actions taken and provide excellent opportunities for the public to express their opinions about a type of project. Line officers are also involved in these trips. Supporting documentation is located in the NEPA project documentation at each of the ranger stations.

- Damage, erosion and changed conditions of prerecorded heritage resource sites are documented. Project areas are inspected upon project completion to verify that flagged archaeological sites have been avoided. Site monitoring forms are kept on file in the Forest Supervisor’s office.

Certain assumptions made in the Carson Forest Plan are continually being validated by many of the monitoring activities listed above. Amendments, such as the 1996 region-wide amendment for the Mexican spotted owl, northern goshawk and old growth, can significantly change how we meet our goals and objectives, but not necessarily the assumptions or desired conditions made in the Forest Plan. Since the Forest Plan primarily

focuses on desired condition rather than how to get there, we can be flexible in finding and determining better ways of moving toward our desired condition.

Upon reviewing Chapter 5 (Monitoring Plan) of the Carson Forest Plan, much of the Carson's monitoring activities are closely linked to the items listed in Chapter 5. Formal evaluation and documentation of these monitoring activities is limited, given the emphasis and budget constraints put on the specialists. The information generated from these monitoring efforts achieves the intent of the majority of monitoring items found in Chapter 5 of the Forest Plan.

3

Evaluation of Monitoring Results and Conclusions

What Have We Learned?

Progress Toward Desired Conditions

The most significant change that has taken place in moving toward our desired conditions over the past several years has been the involvement of people -- as a part of the ecosystem and playing an active role in refining desired conditions. A good illustration of this is with Camino Real Ranger District's (CRRD) emphasis on collaborative stewardship. For example, to reach the desired condition the district has planned and implemented small projects to thin forested stands with the help of the local residents and small businesses. Even with limited funding, the program is gradually expanding, adding new and progressive aspects. The concepts are now being incorporated into the urban interface projects designed to reduce wildfire hazards near forest communities. The CRRD is currently working with the communities of Loma Linda, Fort Burgwin and Valle Escondido. Over 200 homes will have fire hazards reduced as a result of these projects. Dangerous fuels are being removed and/or burned. These projects have and continue to use community interaction through community volunteers and labor to achieve some of the work. The district is also providing personal use products as a part of these projects. The most significant achievement of collaborative stewardship has been designing projects that improve forest health, while meeting the needs of the public.

The success of Camino Real Ranger District's collaborative stewardship program was recognized by being selected as one of this year's ten best Innovations in American Government. This prestigious award, sponsored by the Ford Foundation and Harvard University's Kennedy School of Government, includes a $100,000 grant to replicate collaborative stewardship within the agency and beyond. Engaging the public in developing desired conditions and implementing activities to move toward

those conditions are keys to any progress we make toward accomplishing the Forest's goals and objectives.

The ecosystem analysis process implemented on three of the Carson's ranger districts has resulted in desired condition descriptions that are more detailed and focused. We are now looking at new ways of describing desired conditions, both objectively and subjectively. Vision statements, such as those found in *Forests Forever* (Southwest Forest Alliance), provide us with more understanding of what people focus on when describing their forest. We are listening to what the local public feel is important to them when describing a desired condition. A desired condition is usually described in text form. We are working with various computer programs (such as *Adobe Photoshop*) to provide photographs and/or drawings to depict a desired condition in our ecosystem analysis, NEPA documents or in public places, such as our reception areas.

Cumulatively, many management activities have moved the Forest toward its desired conditions, but progress has not been adequately quantified. As existing information is integrated into GIS, the Carson can better measure its progress toward meeting desired conditions for road density, vegetation structure and composition (including old growth), riparian vegetation condition, visual quality, watershed condition, fisheries habitat, range condition and recreation. Vegetation, topographic and soils layers were completed in GIS in 1999.

- A summary of status and habitat trends for 44 management indicator species (MIS) identified in the Carson Forest Plan (including all listed threatened, endangered and sensitive species thought to occur on the Forest by the US Fish and Wildlife Service) will provide biologists a forest-wide evaluation of MIS habitat to use when analyzing a project's site-specific effects. The report will also be the basis for updating the Forest Plan's MIS list, allowing the district biologist to focus on those MIS that are appropriate for analyzing effects.

- New species have been listed as threatened or endangered since Forest Plan implementation, and these species are being protected through project design features and mitigation measures. Recovery plans have been completed for several species and provide direction to enhance their habitats. Coordination with universities and the US Fish and Wildlife Service and proactive management have prevented the listing of several species, most notably the northern goshawk.

- Monitoring of the population of Rocky Mountain bighorn transplanted to the Wheeler Peak Wilderness from the Pecos Wilderness has shown that reproduction has been successful and the herd is growing better

than anticipated. Monitoring of continued reproductive success may eventually lead to another transplant project, but not likely for another five to ten years.

- Annual elk counts on San Antonio Mountain provide information on how well the herd and elk habitat are being managed. No Sikes Act projects, such as prescribed burning, have been implemented on San Antonio in the past several years, but a prescribed burn was accomplished in the Lagunitas area for the purpose of providing more spring forage for elk. Monitoring has indicated that the elk population on the Tres Piedras RD is fairly stable.

- The stabilization of Rio Grande cutthroat (RGCT) populations and the reintroduction of the species in a number of the Carson's stream reaches progressed well and monitoring is ongoing. However, the threat of whirling disease contaminating New Mexico's trout fisheries is imminent. The disease has been detected in several hatcheries in the state and infected fish have been found in the San Juan River in the northwestern corner of the state. How the disease will affect the Rio Grande cutthroat and other trout is not yet known, but the consequences could be catastrophic. Unfortunately, the RGCT is extremely susceptible to whirling disease. The installation of fish barriers and the improved condition of water quality in many of the Carson's mountain streams may be factors in warding off this devastating epidemic.

- Improved range conditions have resulted from implementation of structural and nonstructural improvements, and more intensive management developed in allotment management plans. Continued NEPA analysis on all of the Forest's allotments will help sustain this type of improvement.

- Watershed conditions have gradually improved through the reintroduction of fire and woodland thinning projects. Road obliteration and road closure have helped restore watershed function through soil stabilization and vegetation establishment. Roads have been moved out of meadows and canyon bottoms where feasible, and riparian function has been improved with structural and nonstructural improvements. No new road construction occurred in 1999. The Forest is moving towards proposing projects that use primarily existing road systems (either currently open or closed), rather than building new roads to access areas on the Forest that need treatment. Proper functioning condition of watersheds has been assessed for a number of watersheds and is ongoing.

- Neotropical migratory bird surveys along the Rio Grande del Rancho have served to also monitor cowbird populations in or near occupied southwestern willow flycatcher habitat. The results from annual monitoring over the past three years indicate an increase in the number of cowbirds along the river. Since livestock grazing on National Forest has not occurred in or near the area for several years, it is deduced that the gradual migration up the river corridor is from the concentrated livestock use in the Talpa area, southeast of Taos. At this point in time, no plans are in place to actively remove the cowbirds, a threat to the SWWF.

- A schedule to complete an inventory of all roads on the Carson NF is in place. A revised transportation plan for the Carson will be put together upon completion of the inventory.

- Overall, Carson customers have been satisfied with the services they have received on National Forest. There are still a few members of the public who complain about having to pay for dead and down fuelwood (a $10/2 cord fee for dead and down went into effect two years ago), but most fuelwood gatherers have been very accepting of the fee system.

- Non-ATV hunters have been complaining over the increasing use of ATVs on the Forest during hunting season. There is little enforcement of ATV use off of designated roads and trails. Hunters on the Jicarilla RD complained of the disturbance caused by an increase in gas drilling activity and traffic in their favorite hunting spots.

- The Tres Piedras RD discovered just how much Hopewell Campground is used. Since the campground has been closed over the past three years for reconstruction, there have been numerous complaints over the closure. This summer, Hopewell will be reopened and it is anticipated that there will be some happy campers.

- Monitoring ski area operations has not exposed any noncompliance or safety violations. Overall, skiers are satisfied with the conditions of the four ski areas on the Carson, although a movement by the snowboarding community to open Taos Ski Valley to snowboarding surfaced in 1999. This decision has been left up to the ski area operator. Many comments from skiers approve of the Ski Valley's decision to remain closed to snowboarding.

- Two years of monitoring the Los Pinos, San Antonio and Tusas rivers and their tributaries have revealed turbidity levels below the threshold listed for a system sustaining a high quality, coldwater fishery. The results indicate that these river systems ought to be reconsidered for

listing as impaired in the next 305b report from the NM Environment Department.

- Other rivers or streams on the Carson that have been identified as having exceeded State water quality standards for turbidity are continuing to be monitored. Projects are also being planned to reduce or eliminate the source of sediment. Proper road maintenance of National Forest System roads could dramatically improve water quality in nearby watercourses.

- The *Removal Preliminary Assessment* for Bitter, Pioneer and Placer subwatersheds will likely result in some clean-up efforts at some abandoned mining sites. An evaluation of what should be cleaned up will be completed in 2000.

- After nearly 20 years of photo documentation of the Wheeler Peak Wilderness to detect changes in air quality of a Class I airshed, it has been determined that photo comparisons are qualitative data that do not provide substantive results in determining whether quantitative standards for air quality have been exceeded. A new air quality monitoring station is being installed in the Taos Ski Valley to monitor air quality in the Wheeler Peak wilderness area using quantitative data, such as percent particulate matter.

- Insect and disease inventories reveal a decrease in spruce budworm infestation on the westside of the Forest and an increase on the eastside. No areas on the Carson were detected as having large epidemic levels of budworm, bark beetle, mistletoe or fungal infections.

- Forest Plan goals for forest health, especially treatment of mid-seral vegetation to improve diversity, have not been met, but the few small projects accomplished each year continue to move the Forest towards its desired condition. Mixed conifer and ponderosa pine forests on the Carson still contain large areas of small, densely growing trees. These conditions pose a threat of catastrophic wildfire over extensive landscapes.

  The Carson continues to find creative ways of accomplishing labor-intensive work (mostly thinning of small diameter trees) as cost effectively as possible. With the constant decline in budgets, this is becoming more and more of a challenge. Last year a Camino Real RD proposal was approved for one of the Forest Service's Forest Management Program Reinvention Pilot projects. A business plan for the Picuris/Truchas Land Grant Project has been developed to address the problem of dense stands of mid-aged trees. Other projects such as this one are also being proposed on other districts.

- Current drought conditions have resulted in later than normal turnouts on range allotments. Range readiness is monitored on annual basis to determine the time livestock can be released onto an allotment pasture. If conditions continue to remain dry, turnouts are predicted to be later in the spring of 2000.

- Range condition and trend is monitored and analyzed on several allotments on the Carson each year. The results on range analyses provide a basis for developing a proposed action for NEPA documentation for range permit issuance.

Emerging Issues

Human Dimension

Demographic trends indicate an increase of people migrating to the Southwest from other parts of the country. Although this trend includes an overall transition from a public that desires emphasis on commodity-oriented products and services, to a public that wants programs and program delivery to be amenity-oriented, there are still many small mountain communities dependent on the Carson National Forest for basic subsistence. A delicate balance exists of meeting the local needs for fuelwood, building materials, forage for livestock, water for irrigation, and those who have just come into some of these communities wanting to see a greater number of recreational opportunities, equal access, and possess an ever-increasing sensitivity to macro- and micro-environmental issues.

Some of these very diverse demands can be met simultaneously. There are a few special interest groups that don't want the harvesting of trees over 16 inches DBH in National Forests. Most of the products that local communities need are less than 16 inches. But there is no doubt a battle raging over the proper use of public lands that will shape the development of a forest plan revision in the future.

On average, the budget for the Carson National Forest has declined 25 percent over the past five years. In contrast, demands on the Forest are increasing as more people with diverse values use it.

Declining budgets have prompted the Forest to develop more partnerships with groups and organizations tied to monitoring. For example, the Quivira Coalition is funding the Jornada Experimental Range out of New Mexico State University to monitor certain aspects of the Santa Barbara Watershed Restoration project, on the Camino Real Ranger District. They will be documenting and analyzing changes in soil productivity and

ground cover composition prior to, during and after the project implementation. The Carson will focus on such changes as to the Mexican Spotted Owl microhabitat, such as canopy cover and structural diversity.

The Carson will also continue to work closely with the NM Department of Game and Fish in monitoring populations – primarily big game.

Physical/Biological Dimensions

The evolution toward an ecosystem management approach has renewed the Carson's sensitivity to ecological issues. Coupled with human dimension trends, this situation has brought needed Forest Plan modifications to the forefront. An increase in the number of threatened and endangered plants and animals, increased knowledge of the function, processes, and interrelationship of ecosystems, and recognition that thresholds exist beyond which those systems may no longer be sustainable are foundation concepts upon which Plan Revision will be built.

Issues Being Litigated

Although there were no court cases related to the Carson in 1999, the Forest continues to operate under a court order related to the Vallecitos Federal Sustained Yield Unit.

Challenges to grazing on public lands will continue to be a primary focus for the Forest Service in the Southwestern Region.

Issues Being Appealed

Administrative appeals relating to decisions being made on the Carson are primarily regarding permit issuance on grazing allotments and timber sales.

It goes without saying that almost all allotment decisions are being appealed by Forest Guardians. These appeals focus on 1) not completing a grazing suitability analysis and 2) not completing a cost/benefit analysis.

Since the 1996 Amendment of Forest Plans, the Carson has moved from large, commercial sawtimber sales to much smaller, small diameter local sales. These smaller sales are oriented toward creating a desired condition versus producing products, and apply a much lighter harvest level.

Recent decisions for harvesting timber on the Carson have been made with a Decision Memo, categorically excluded under category 4. In September, 1999, category 4 (FSH 1909.15 Chapter 30, section 31.2(4)) was declared "null and void" by a District Judge in Illinois (*Heartwood v. USFS*, No. 98-CV-4289-JPG (S.D. Ill.). The Carson had four decisions affected by this court decision.

The approach that the Forest is taking with the four proposals is to either 1) change the proposed action so that no commercial logging is included and then making a decision under another categorical exclusion or 2) proceeding with an environmental assessment.

Other Issues

Endangered Species Act consistency relative to Forest Plans was challenged and a proposal to amend Land and Resource Management Plans (Plans) for the Southwestern Region of the Forest Service was the result. The proposed amendments will add standards to protect habitats for threatened and endangered species. The Southwestern Region of the Forest Service proposes to amend the eleven plans for the forests and grasslands. The amendments would add new standards that strengthen direction for the protection of federally listed threatened and endangered species. The only species included in the proposal that would affect habitat management on the Carson is the southwestern willow flycatcher. The amendment would apply to all subsequent project-level resource management decisions that will include site-specific environmental analysis and appropriate public involvement. The draft environmental impact statement for the amendment is expected to be available in the spring of 2000.

Improving wildland-urban interface is an issue, especially after the substantial property losses caused by the 1996 Hondo Fire. Improving the wildland-urban interface is an issue which is being addressed now, and will continue. Forests that are at high risk of catastrophic wildfire, especially after experiencing several years of drought, surround the mountain communities such as, Red River, Angel Fire, Penasco, Tres Ritos, Canjilon, Vallecitos and others. Public awareness programs are ongoing and implementation strategies are being developed. Safely restoring natural fire into adjacent ecosystems is a part of long-term solution that needs to be developed. Ecosystem analyses for the Camino Real, El Rito and Canjilon ranger districts, as well as, the Red River and Hondo Fire areas have been completed. Priority treatment areas were identified.

Forest health is an issue related to historical activities on the Carson National Forest that have resulted in unnaturally dense conditions, reducing the biological diversity across an expansive landscape. Thousands of acres need to be thinned in order to move toward a more natural and healthy forest. It is essential to reestablish the large tree/old growth component important to many wildlife species and, eventually, a sustained yield of larger products. Government downsizing has reduced the number of employees and funding. This, in turn, limits the treatment of acres needed to significantly improve forest health.

Collaborative stewardship is a priority issue of the Chief's. New relationships with partners and members of the public are breaking some traditional barriers. Collaborative stewardship is helping to address such emerging issues as:

- identifying and addressing needs of growing communities in and adjacent to the Carson National Forest.
- continuing to deliver programs which balance amenity, commodity and lifestyle needs.
- creating effective relationships with the local Native American tribes.
- developing a common understanding of desired condition.

Listening to people, however, requires a significant amount of employee time. There has to be time left over to administer the work on the ground. The time limitation also takes its toll on incorporating the stewardship concepts to the myriad of programs and issues across the Forest. For example: reaching consensus on forest roads and transportation systems or resolving conflicts between recreation user groups such as all terrain vehicle enthusiasts and archery hunters.

In reality the downsizing and decreasing budgets, along with the conflicts and discontent, helped to stimulate or necessitate collaborative stewardship - a new way of doing business. Ironically, downsizing and budget cuts are now the limitations on implementing the program in all facets of the Forest's responsibilities. In the past several years, the Carson has experienced over a 30 percent reduction in the permanent workforce. Restricted resources limits our ability to serve the public and care for the land.

Ecosystem management -- the emphasis to become an "ecosystem management driven" organization instead of a "timber driven" organization fits well with the shift to *Collaborative Stewardship*. However, doing the

“right thing" does not always produce significant revenue for the US Treasury. The government appropriation system still largely ties funding to outputs. This makes sense if you are in the business of selling a product. It creates problems when you are in a stewardship role, maintaining a healthy, fully functioning ecosystem. Products do result from management, but they are not the driving force and may not be the “high volume" producers.

Watershed and riparian health are the keys to a sustainable, healthy forest ecosystem. Historic railroad logging across watersheds and settlement activities (such as intensive grazing) in riparian areas, significantly altered these systems in the early 1900's. Although most of these systems have remarkably recovered, many still need improvement to regain their full natural function.

The President’s Roadless Initiative will likely become an issue in the forefront of Forest planning over the next several months, as the public and the agency learn more about what is being proposed and how it might affect programs associated with the Carson Forest Plan.

The Proposed Planning Rule will likely attract more attention and interest, if it is incorporated as Forest Service regulation. The final rule, based on the *Committee of Scientists Report*, may be what guides the Carson through a Forest Plan revision.

Related Issues Emerging on the Carson

Water is the lifeblood of the West and northern New Mexico is no exception. Issues related to water on the Carson include:

- water quantity
- identifying and managing water rights
- restoring fisheries functions where appropriate (the treat of whirling disease)
- water quality

Surveys are being completed to identify the location and condition of existing riparian areas. Properly functioning conditions are also being assessed. For key projects, baseline watershed quality information is being collected.

Access to and within the Carson National Forest is an issue that continues to become more complex. Transportation issues include:

- improving accessibility to all users through better road and trail systems management.
- addressing the needs of off-highway vehicle use.
- increasing need for higher maintenance levels and better signing of Forest roads.
- private development of lands adjacent to the Forest boundary, especially around Taos, Red River, Angel Fire and Tres Piedras. Traditional access to the Forest is being denied along some interfaces where residential subdivisions are developed.
- increasing demand for rights-of-way across National Forest lands.
- effects that a National Road Management Policy might have on the Carson is unknown right now.

Barriers To Effective Monitoring

The predominant barriers overriding effective monitoring and evaluation have been higher priority work and lack of funding. Congressional and budget intent comes to us functionally, and is still tied to targets. In addition, user groups want us to produce a "product" (wilderness experience, firewood, forage, clean campgrounds, etc.) for them. Few are asking for monitoring results. In order to show responsiveness toward the public and accomplishments to Congress, we maintain focus on products and targets. Often any internal or external interest there may be in monitoring is focused on the "gotcha" versus the adaptive management of learning. People or special interest groups are more interested in using our deficient documentation of monitoring activities as a way of demonstrating that we are not following regulations.

Another barrier has been the perception that monitoring can only be complex, scientifically designed, and rigorously evaluated activities. Many of the monitoring activities we have institutionalized are not even recognized internally as monitoring. These perceptions are compounded by the absence of Forest, Regional, or National strategy clearly and efficiently linking existing efforts or identifying stratified actions that could serve multiple organizational or resource levels.

The ecosystem analysis process that was implemented on three of the Carson's districts included a monitoring schedule that the employees prepared for the next 4-5 years. The schedule addressed the monitoring that would be needed for the list of proposed activities that came out of the EM process. Many of the activities have been implemented, but the monitoring has not been documented and districts have not updated the schedule. There is simply little incentive to accomplish monitoring.

4

Action Plan

What Do We Plan To Do About It?

- Develop and issue correction pages for the Forest Plan to incorporate the changes in standards and guidelines made through the June, 1996 Record of Decision (ROD) for Amendment of Forest Plans. This region-wide amendment includes direction for the Mexican spotted owl, northern goshawk and old growth. Currently the ROD is used as a separate document to the Forest Plan.

- Complete the eligibility and classification analysis for wild/scenic/recreational river designation for the Forest and amend the Forest Plan to add eligible river sections to Management Area 18. This will protect these areas until a suitability assessment can be done.

- Issue correction pages for the Vallecitos Federal Sustained Yield Unit section of the Forest Plan to comply with two court settlements (March, 1996).

- Compose a white paper that assesses the status and habitat trends for 44 management indicator species (MIS) identified in the Carson Forest Plan (including all listed threatened, endangered and sensitive species thought to occur on the Forest by the US Fish and Wildlife Service) to provide biologists a forest-wide evaluation of MIS habitat to use when analyzing a project's site-specific effects. The report will also be the basis for updating the Forest Plan's MIS list, allowing the district biologist to focus on just those MIS that are appropriate for analyzing effects.

- Compose a white paper analyzing the cumulative effects of current projects for each ranger district. Each paper would address and analyze the effects of past, present and foreseeable future projects for increasing number of smaller projects each district is proposing. These projects are being implemented over a shorter period of time than past projects, which were designed and implemented at a much

larger scale over a longer time frame and cumulative effects were more intensively analyzed through the EA or EIS process.

- Review the Forest Plan and eliminate extraneous information. Renumber the pages to eliminate confusion with current "section numbering". Consider reformatting to create a more "user friendly" document.

- Amend the Forest Plan to incorporate any resulting direction from the region-wide Record of Decision for Amendment of Forest Plans for plant and animal species listed as either threatened or endangered since the approval of the Carson Forest Plan (1986). The EIS for the region-wide ROD has not yet been completed.

5

Status of Previous Year's Recommendations and Current Year's Recommendations

Recommendations for FY 2000 are the same as those in FY 1999, with the addition of the MIS white paper.

6

Research Needs

The following are questions about relationships, processes and species about which more or better information would enhance management of the Forest:

- Current standards and guidelines are tied to single wildlife species. How does one develop a more holistic ecological perspective that addresses the processes of all animal and plant species on the Carson?
- What was the historic spatial arrangement of mature Douglas-fir?
- What bat species are found on the Carson and where?
- What other native fish are found on the Carson besides the Rio Grande cutthroat trout?
- Where are range lands depleted, as they relate to historic overgrazing?
- What research documentation is there that describes the possible effects of the management practices most commonly proposed in current projects?
- What are the impacts on the environment of increasing elk herds on the Carson? Where and how much forage is utilized by elk? What is the season of use for elk?
- What are the effects of forest activities on the lifestyles of people living in rural mountain communities in or near the Carson National Forest?
- What affects do existing roads have on extending drainage networks? Timing? Peak flows? Patterns of interception and rerouting?
- What is the best grazing system to apply to high mountain areas where forage is limited?

7

List of Preparers

Karen Cook-Romero	District Recreation Planner
Francisco Cortez	District Biological Technician
Lupita Espinoza	Budget Management Officer
Evelyn Gallegos	Information Receptionist
Lisa Goodman	Civil (Facilities) Engineer
Melvin Herrera	District Range Conservationist
Camela Hooley	District Wildlife Biologist
Dan Kite	Information Receptionist
Carveth Kramer	Forest Planner
Audrey Nes Kuykendall	Natural Resource Planner
Ben Kuykendall	Wildlife Biologist, Special Projects
George Long	District Wildlife Biologist
Peggy Martinez	Resource Clerk
Greg Miller	Forest Soil Scientist/Hydrologist
Ben Romero	District Wildlife Biologist
Ray Romero	Forest Wildlife Biologist
Francisco Sanchez	District Wildlife Biologist
Len Scuffham	Forest Silviculturalist
John Shibley	Assistant Forestry Staff
Donna Storch	Forest Fisheries Biologist
Herb Vigil	Civil Engineer
Shirley Smith	Information Receptionist
Jessie Trujillo	Information Receptionist

8

Public Participation Plan

In order to involve people, they must want to participate in the process. The only way to accomplish this is to find a mutually acceptable avenue to work with people in a rational, planned manner. Just as critical as the process, is the way we approach people. A public involvement strategy for monitoring the Forest Plan needs to be developed using a framework to help build a strong and continuous relationship with the public.

Preparation of a public involvement strategy for Forest Plan monitoring using a basic framework will force the Forest or participants to look at monitoring at a broad scale, helping to insure appropriate public involvement and realistic time frames. Public review of this strategy will bring participants aboard early in the process.

The strategy is made up of five questions:

1) What are the objectives for involving the public in Forest Plan monitoring?

   - To build credibility and trust with our public by making sure we do what we say we were going to do.
   - To maintain relationships with community members that have been with us through the NEPA process and project implementation.
   - To share our increased knowledge base.
   - To illustrate the “can to” of project implementation (implementation monitoring).
   - To achieve monitoring – ensure that it will happen.

- To find ways to accomplish monitoring programs where time and money is limited.
- To report the monitoring results back to those who are interested.
- To validate our assumptions that were communicated to the public during site-specific analyses.

2) What is the operating environment that might affect involving the public or meeting the PI objectives for Forest Plan monitoring?

   - Forest Service, public and/or stakeholder burnout on the project and process.
   - Funding and commitment for monitoring.
   - New information on what we need to monitor.

3) Who are the stakeholders / audience that need to be involved help meet the PI objectives for Forest Plan monitoring?

   - Stakeholders, who may or may not have been involved in the forest planning process thus far, but want to monitor and recognize the importance of monitoring.
   - Those who are vested for the long term in the landscape and process.
   - Both internal and external stakeholders. Different roles are played by Forest Service responsible officials and employees, other federal agencies, tribal governments, Congress, special interests, academia and the general public.

4) What methods will be used to reach stakeholders and meet PI objectives for Forest Plan monitoring?

   - Put together a volunteer work group to do a monitoring.
   - Direct mailings to those interested of on-going survey data.
   - Worldwide Web (real time access to monitoring results).

5) How well were the PI objectives for Forest Plan monitoring met? (Can we validate our PI assumptions?)

   - Have the results of monitoring helped us to communicate with the public on resource issues and validating our assumptions?

- Has sharing implementation of the monitoring process and the results of monitoring, helped us gain credibility and reduce uncertainty (augment trust or the publics comfort level) with our stakeholders?

- Have we increased the public's willingness to defer to our judgment.

It is important to keep in mind when applying this framework that the method and depth of public involvement used will depend upon the kind of monitoring that needs to be done (the problem), the people who are interested and/or affected and how the responsible official wants to involve the public in monitoring.

A Public Participation Plan must be in line with the budget, while not changing the process. In preparing to involve the public in Forest Plan monitoring we must look ahead to expenses incurred by employees time, equipment, mailings, written and presentation materials, travel and monitoring evaluation.