United States Department of Agriculture

Forest Service

Southwestern Region

2004 Forest Plan Monitoring and Evaluation Report

Prescott National Forest

1938 – A picnic at Mingus Mountain. Photo by C. Cunningham FS # 371924

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Section 1 – Resource Monitoring Summary

Introduction

Forest Plan monitoring is an ongoing process that assesses the response of the Forest environment to management activities undertaken to move the Forest from an existing condition to a desired condition as described in the Forest Plan. Stress on the Forest's natural systems by drought and other factors further elevates the importance of monitoring because of the need to assess the extent of the response of ecosystems to the stress and to determine appropriate management actions.

The purpose of monitoring and evaluating the implementation of the *1986 Prescott National Forest Land Management Plan* ("Forest Plan," as amended, and as republished in December, 2004) is to inform the decision maker of the progress toward achieving the goals, objectives and standards and guidelines. This report documents and evaluates the results of the monitoring that occurred during fiscal year 2004 (October 2003 through September, 2004) and describes the rationale for any changes to the Plan recommended by the monitoring team.

This report meets the intent of Chapter 5 of the Forest Plan to "analyze and evaluate the significance of the results of the monitoring action plan" (p.73). It also provides an important communication link with the public and within the agency. By disclosing the effectiveness of the Forest Plan, the Forest is able to better identify future research needs and to shift monitoring activities to more effectively measure overall Forest health.

One of the requirements of the Forest planning process was a commitment to monitor and evaluate how well Plans are implemented (*36 CFR 219.12(k)*). The process includes opportunities for modifications to the Plan in response to this monitoring. As stated in the Code of Federal Regulations, the purposes of evaluating Forest Plans are as follows:

- To consider the effects of National Forest management on land, resources, and communities adjacent to or near the National Forest and the effects of National Forest management on nearby lands managed by other government agencies or under the jurisdiction of local governments (*36 CFR 219.7(f)*).
- To determine if budgets have significantly changed the long-term relationships between levels of multiple-use goods and services enough to create the need for a significant amendment (*36 CFR 219.10(e)*).
- To determine if conditions or demands in an area covered by a Forest Plan have changed significantly enough to require a revision to the Plan (*36 CFR 219.10(g)*).
- To determine how well the stated objectives of the Forest Plan are being met (*36 CFR 219.12(k)*).
- To determine how closely Forest Plan standards and guidelines are being followed (*36 CFR 219.12(k)*).

Forest Plan monitoring requirements are available upon request. For each activity or practice, the effect to be monitored, one or more measurement techniques, and the expected future condition to be met are specified. A frequency for measuring and reporting the monitored item is established, and the expected precision and reliability of that measurement is stated. (Precision is the exactness or accuracy with which the data will be collected; reliability is the degree to which the monitoring accurately reflects the total Forest situation.) In general, monitoring will determine:

- If management prescriptions are applied as directed.

- If standards are being followed.
- If the Forest is achieving its objectives.
- If management prescriptions are responsive to public issues and management concerns.
- If effects of implementing the Forest Plan are as predicted.
- If costs of implementing the Forest Plan are as predicted and are acceptable.
- If management practices on adjacent or intermingled non-Forest lands are affecting Forest Plan goals and objectives.

Based on the evaluation of the results, the monitoring team makes recommendations to the Forest Supervisor. These can include:

- No Action Needed - Monitoring indicates goals, objectives and standards are being reasonably achieved.
- Refer Recommended Action to the appropriate line officer(s) for improvement or application of management prescriptions.
- Modify the Management Prescription or assignment of a prescription as a Forest Plan amendment.
- Revise the Projected Schedule of outputs; Initiate Revision of the Forest Plan.
- Identify Research Needs.

It is important to note this is not a monitoring report on individual projects, which is an ongoing Forest activity. However, results of some individual projects have been considered in the preparation of this report.

Fire Management

Periodic inspections and reviews are used to determine if the fire management organization is effective and safe. The Thirty-mile Fire Accident Prevention Plan has been implemented at the Forest level.

Winter/spring moisture was near normal, with weather stations reporting the following precipitation:

- Iron Springs 20.82 inches
- Crown King 28.96 inches
- Verde 8.29 inches
- Cherry 18.35 inches

The drought still persists, and all indications point to an above-average fire season. Bug-killed trees are showing signs of falling; this will increase fire resistance to control for years to come. The Forest implemented campfire and smoking restrictions in mid-May through mid-July, but normal moisture and the lack of heavy lightning during the summer monsoon season was enough to restrict potential fire starts and spread. As a result, suppression efforts were successful, although not really tested with highly adverse conditions.

Large fire activity throughout the nation was light. Off-Forest fire-fighting assignments for Prescott Hotshots resulted in about 70 days, while engines were out only about 50 days total. Overhead assignments were light as well.

The Forest monitors the cumulative annual treatment of vegetation by fire in order to evaluate trends in vegetation change. The purpose is to keep prescriptions in line with changes in vegetation conditions due to prescribe fire and naturally-caused fire burning under prescription, and to update prescriptions as needed.

In 2004, both mechanical and prescribed fire treatments were used to reduce fuel loadings. Mechanical treatments were conducted in the chaparral type, to improve the condition class and enhance the ecosystem. Approximately 181 acres of mechanical treatment in chaparral vegetation were accomplished and 260 acres were placed under contract for completion next year.

Mechanical treatment continues to be very effective in reducing fuel loadings, while improving vegetation ground cover and wildlife habitat. Maintenance of mechanical treatment areas by using prescribed fire shows promise in slowing re-growth and increasing forbs and grasses.

The Forest completed 5,871 acres of prescribed fire. Prescribed fire was applied in wildland/urban interface areas in ponderosa pine, as well as in chaparral, which created the desired mosaic and resulted in reduced fire hazard.

Table 1: Prescribed Fire History

YEAR	GRASS	CHAPARRAL	PINE	WOODLAND
1987	5,000	11,930	0	0
1988	3,500	9,358	984	0
1989	6,000	1,000	910	152
1990	3,500	0	1,150	270
1991	2,344	1,800	0	410
1992	2,500	0	75	1,176
1993	2,000	1,200	96	0
1994	1,500	4,800	150	0
1995	3,200	2,100	110	0
1996	0	1,200	241	0
1997	0	3,492	768	0
1998	0	6,000	0	0
1999	0	7,500	0	0
2000	3,000	2,500	1,100	0
2001	6,000	8,000	100	1,000
2002	0	300	288	0
2003	0	7150	500	0
2004	0	4071	1800	0
TOTAL	38,544	72,401	8,272	3,008

Heritage Resources

There are 36 sites that the Forest manages that are listed as National Register Properties. Since a number of these are Forest Service administrative sites that are actively being used, many are visited throughout the year by heritage resource management personnel. Those National Register properties that are not used on a day-to-day basis are visited less regularly. The less- visited sites are customarily checked as the opportunity arises, which usually occurs every few years. These 36 properties experience little overall change from year to year. Since most of these sites are historic properties, the primary activity involves

routine maintenance on historic buildings. Forest maintenance funds for such structures are stretched thinly to cover these sites; however, not surprisingly, those that are continuously occupied are given more attention. Prehistoric sites that are listed at National Register properties seem to be more affected by natural processes than direct acts of vandalism. As far as can be determined, prehistoric sites remain in fairly stable condition with no major impacts that have altered the historic integrity of these sites.

There were 66 heritage resource projects completed in fiscal year (FY) 2004 in the Forest, resulting in the discovery of 59 archaeological properties. In addition to discovering new archaeological properties, 66 previously recorded sites were monitored in relation to project activities. Of the projects that were surveyed, 38 (58%) resulted in direction to manage for the presence of historic and prehistoric resources. This is slightly above the previous year. Pre-project monitoring of implemented projects where sites are present consisted of assuring that sites were properly identified and marked for avoidance and then checking the sites and removing identification boundary markers once the project was completed. It is not uncommon that sites are visited more than once during the life of a project to ensure that they are protected.

Monitoring also consisted of checking about 60 non-project-related sites for signs for vandalism and natural deterioration. These sites are located throughout the Forest and consist of both prehistoric and historic sites. Monitoring identified two primary issues related to site integrity. The first involves environmental facts, typically related to weather events. Rain in the form of "downpours" creates sheet and rill erosion, causing artifacts to be displaced and archaeological features to be compromised. Although no quantitative data exist as to the seriousness of this problem, sites are being impacted when heavy rains occur. The second issue that affects site integrity is direct and indirect vandalism. During 2004, the Forest was involved with 10 law enforcement events concerning archaeological sites. This number is slightly elevated from the previous year.

Special monitoring attention was given to the Puntenny Limestone Kiln Site. The site was assessed by archaeologists, an engineer and a health and safety officer to determine if the site was unstable and what actions could be taken, if any were needed, to correct the problem. A field assessment of the limestone kiln suggested that recent, heavy rains in 2004 may have affected the site's overall structural stability. Fissures in the masonry may be widening and the foundation of the kiln may have experience some settling. Currently a wooden fence with warning signs exists at the site, but additional measures were discussed as to how to provide more effective protection for the public and the structure. Various protective measures were considered regarding how to treat the site, with the most cost effective action being the construction of a protective fence around the kiln.

Three Damage Assessments for archaeological properties were completed in FY 04. Damage Assessments are a form of monitoring that assesses the condition of an archaeological property, albeit after it has been affected by present-day human activities. Damage Assessments are done when an archaeological property sustains some level of impact due to human error or neglect. The three Damage Assessments showed that several sites were affected by direct impacts of mechanical equipment. In one case, artifacts were displaced but no archaeological features were impacted. The two other cases are still undergoing assessment.

Insects and Disease

The Forest annually monitors insect and disease conditions in order to better predict future impacts. The desired condition is that insect and disease problems will not have serious adverse effects on the Forest due to an appropriate mix of silvicultural activities, treatment of slash and various other control methods.

In 2004 mortality from Ips bark beetle decreased significantly from the previous year, due to better winter and summer moisture. In addition to the better moisture, many of the more susceptible poor pine sites (side hills with shallow soils, ridge tops with shallow soils and brush areas where pine had encroached) had already been affected in 2002, leaving the more resistent pine sites with deeper soils and areas that had been commercially thinned. Even though the Ips bark beetle population was high in 2004, the increased moisture and better sites (of which many had been thinned) seemed to have kept the mortality near the 2001 endemic level.

Western pine beetle mortality remained steady, with only individual trees affected. Mistletoe continues to be a problem in some pine stands. The mortality in pinyon pine stands in 2004 was reduced due to the increased moisture.

Lands

No rights-of-way were acquired in 2004.

Noxious Weeds

155 acres of invasive plant species were treated in 2004, mostly by hand grubbing. The largest single treatment was by herbicide application. This area comprised 30 acres of sweet resin bush near Cottonwood that was initially mowed in 2002 and sprayed with herbicide in 2003. Continued treatments will be needed in future years. Forest employees, other agencies and volunteers were involved in treatments.

The Forest continues to be involved in the Western Yavapai and Verde Valley Weed Management Areas and in the Southwest Vegetation Management Association. Participation in these organizations allows networking about invasive plant species with other governmental agencies and private parties and is the means for cooperative treatments, as noted previously. Invasive plants surveys continue and population locations are identified by GPS and added to the weeds atlas. The weeds atlas is a statewide mapping of identified weed populations.

Preparation of an Environmental Impact Statement for the Three Forest (Kaibab, Coconino and Prescott) Noxious Weed analysis was completed and published.

Protection

The Forest currently has two full-time Law Enforcement Officers (LEOs) and a Patrol Captain who also supervises the Kaibab National Forest law enforcement activities. A third full-time LEO position has been identified on the current organization chart, but is not expected to be filled in the near future due to budget constraints.

There continues to be a number of crimes committed on National Forest lands. Some of the more serious crimes included homicide, rape, assault and drug crimes. In 2004, the LEOs made 13 arrests for resource-related violations and assisted other agencies in an additional 12 arrests, approximately the same as in 2003. Law enforcement incidents reported for 2004 on the Forest totaled 1,574. Of these, there were 163 violation notices written, 553 warning notices and 858 other incidents.

During 2004, the LEOs worked a combined total of 8,527 hours and made approximately 2,934 contacts with the public, a significant increase in both hours worked and contacts made over the previous year. LEOs also provided off-Forest assistance to the National Rainbow gathering, Large fire incidents, the Diamond Bar ranch incident, and several border operations on the Coronado National Forest. Demand for LEO assistance is increasing and, with a current vacant position on the Kaibab National Forest, will cause the hours worked by each LEO to increase.

In 2004, there were 27 certified Field Protection Officers (FPO) on the Forest; 22 of these FPOs recorded incidents in the LEIMARS data base. Of all the FPOs, again, only 6 recorded more than 20 total incidents for the year. A majority of those incidents reported were warnings issued for non-compliance in fee areas.

The Forest continues a cooperative agreement with Yavapai County Sheriff's Office to assist in visitor protection. This agreement also covers those portions of the Kaibab, Coconino and Tonto National Forests within Yavapai County. Funding for the agreement has been stagnant for the last several years and the number of deputies assigned to patrol the Forest remains at three. Demands on those Officers continue to rise as they respond to an increasing number of search and rescue calls, visitor assists and crimes against persons in the National Forest.

Incidents by Resource Area:

1. Protection of cultural resources: The Forest recorded six incidents involving removal or disturbance of cultural sites. Of those incidents, one individual was cited and performed restoration to the site, and one other suspect was identified but not prosecuted.

2. Fuelwood theft: There were 66 timber-related incidents reported for 2004, an increase of 17 incidents over the previous year. In seven cases, the violator was identified and warned. In three cases, the violator was issued a citation. In the remaining 56 cases, the damage or theft was discovered, but Officers were unable to identify the violator.

3. Fire Violations: There were a total of 352 fire violations for the year, an increase of 32 incidents over the previous year. In most instances, these incidents involved either having a fire during restrictions, or having a fire outside a designated area. Abandoned campfires continue to be a problem in the designated dispersed areas.

4. Occupancy use: Occupancy, combined with sanitation issues such as littering, remains the largest category of violations experienced by the Forest. 443 violations were reported in 2004, a slight increase over 2003. Many of the occupancy violations involved persons exceeding the established stay limits in the designated dispersed campsites and homeless persons attempting to reside on the National Forest. Littering and dumping is prevalent throughout the area and is committed by all classes of visitors.

5. OHV: There were a total of 62 violations reported for driving off-road, causing unreasonable damage off-road or driving on a closed road. This is an increase from 51 violations for the previous year. The trend continues upward in OHV use and the damage caused by them.

6. Property damage/stolen: There were 90 reports of property damage or stolen property made in 2004. Of these, in only seven cases was the identity of the violator known. There was one case in which the suspect was prosecuted and restitution for a damaged recreation sign recovered. Most of these violations involved damage or theft of Forest signs, which is causing a strain on tight Forest budgets.

Range Management

Drought once again played a large part in the program of work for Range Management. Forty-three (43) allotments (approximately 1,000,000 acres) were inspected, including all stocked allotments and a number of allotments that were not stocked. All allotments with Threatened and/or Endangered species were monitored for compliance with Endangered Species Act Section 7 consultation agreements. Adjustments were made to stocking and to grazing management that corresponded with changing conditions. Permit holders were either involved in inspections or were notified of findings.

Three range improvements involving water wells were constructed this year. Additional projects completed included heavy maintenance of fencing and a variety of small water projects (trick tank repair, pipelines and troughs) conducted with the aid of the affected permit holders.

No direct treatments to increase forage production (brush removal, reseeding, etc.) were conducted this year.

Stocking continued to rise as more normal summer rainfall improved resource conditions over 2002 and 2003. Approximately 8,614 cattle were authorized to graze at some time during 2004. This is 65% of the 13,280 cattle currently permitted on the Forest and a 61% increase from the 5,225 animals grazed on the Forest in 2003. Most of this reduced stocking was in response to the ongoing drought.

Capacity for grazing is monitored in two ways: (1) Through inspections to determine short-term needs for adjustment in stocking, and (2) when analyzing data collected for grazing project analyses under the National Environmental Policy Act (NEPA). Data included existing condition plot data from the ecological inventory and the Terrestrial Ecosystem Survey combined with inspections. Condition and trend do not change annually, so a more accurate description is measurement of indicators of change. Condition has a shorter period for change and must be monitored; if findings show a decline, then action is required before trend declines. This is tracked through short-term monitoring.

Grazing NEPA decisions were made for five allotments as part of the Chino Grazing Project, while NEPA analysis on five other allotments continued. The Verde Wild and Scenic River project was completed; it included analysis of grazing effects on the outstandingly remarkable values that led to the designation of the river as part of the Wild and Scenic Rivers system.

Recreation

Developed recreation facilities usage was up slightly for 2004, despite continued higher prices for nearly everything recreationists purchase. Higher prices on a national level may have contributed to people recreating closer to home, or better record keeping detail on the Forest's part may be responsible for the increase. Despite closing one of the most popular campgrounds on the Forest (Lynx Lake) for renovations for the entire 2004 season, developed recreation sites still experienced an overall increase in recreation visitation.

During 2004, removal of dead and dying trees in and around developed facilities was nearly completed, which contributed to less disruptions for visitors. Reduction of the threat of forest fires in or near campgrounds also eased visitors' safety concerns. Completion of thinning and other tree removal activities in 2005 should encourage an additional increase in future visitation as well.

Developed recreation usage continued to be concentrated on weekends during the spring, summer and early fall. During 2004, approximately 185,515 visits occurred, based on extrapolated data compiled

from paid fee envelopes and personal observations by recreation staff. There were approximately 47,490 overnight camping visits, including group sites, and 138,025 day-use visits. Using a recreation visitor day (RVD) multiplier of six for an average two-day camping stay, the overall RVD total for 2004 reached 447,000, which for the first time exceeded the current Forest Plan estimate of 380,000 RVDs. However, despite the overage, there still appears to be available capacity in the current developed recreation facilities. During the peak recreation summer months, campground occupancy can average near the 80-100% rate (on weekends), but occupancy over the entire seven-month season is considerably less, as indicated by the list below.

Groom Creek Horse Camp:	19%	(2003: 11.5%)
Hill Top Campground:	50%	(2003: 21%)
Yavapai:	45%	(2003: 36%)
Lower Wolf Campground:	22%	(2003: 12%)
Lynx Lake Campground:	Closed for 2004 season.	(2003: 33%)

Lynx Lake campground (38 sites), Mingus Mountain campground (20 sites) and Indian Creek Group campground (60-person limit per reservation) have been under construction or reconstruction during 2004, but should be open once again during 2005.

Forest-wide dispersed site monitoring occurred from April through October in 2004 by fire prevention and forest protection officer patrols. Prior to April and after October, there are little or no patrols of dispersed sites. Actual use figures for Alto Pit and Hayfield Draw developed off-highway vehicle (OHV) areas totaled about 4,500 visits, based on an analysis of fees collected. Since these OHV areas are usually unhosted, it is suspected this figure is underestimated by a factor of three. However, there may have been a drop in visitation in the OHV areas due to Forest restrictions, inclement weather and construction in the Alto Pit OHV area.

As reported through the National Visitor Use Monitoring Survey (NVUM), there were 77,864 visits to the Forest for dispersed recreation in 2004 (including OHV use), which was fifth highest in the Southwestern Region (Arizona and New Mexico). There were 31,708 visits primarily for OHV use (third in the Region). Through field interviews, the NVUM report identified dispersed activity use as follows:

- Hiking or walking: 62%
- Viewing wildlife, birds, etc.: 60%
- Off-highway vehicle travel (4-wheelers, dirt bikes, etc.): 13%
- Driving for pleasure on roads: 20%
- Bicycling/mountain biking: 7%.

2001 was the last year monitoring was conducted for dispersed recreation. In 2001, the Forest began implemented the Prescott Basin II decision regarding dispersed camping around the city of Prescott. As decided in the Prescott Basin Plan, 111 designated dispersed campsites were established to reduce impacts from unrestricted camping outside of developed campgrounds within the 50,000-acre Prescott Basin study area, and dispersed camping was not permitted outside these designated areas. A volunteer group formed in FY 02 was assigned the responsibility of inventorying, monitoring and maintaining each site. In addition, the volunteer group signed each site (included site restrictions), and in some instances, began

improving the sites. Fire prevention and Forest Patrol Officer patrols helped monitor these sites, concentrating on fire prevention, camping limits and education. Volunteers are used for maintaining dispersed camp areas year-round. Volunteers report anything they feel is unusual about the use of dispersed camp areas and about the condition of the area itself. In 2004, many of these sites were heavily impacted from fuels treatments (brush crush) and timber harvesting, leading to a need to reevaluate the campsites. Three designated campsites were closed on Corley Mine Road when impacts from trash dumping, shooting and partying negatively affected the nearby private land and neighborhood.

In 2004, the Prescott National Forest managed 41 miles of Verde Wild and Scenic River in cooperation with the Tonto and Coconino National Forests. Nine Verde River cleanup trips accounted for 158 work days in 2004. The cleanup days focused on inventorying camp sites, removing trash and cleaning user-made fire pits. A total of 31 extra large trash bags were filled and removed, and additional large items were removed (two rafts, two canoes, eight tires, one mattress and some chairs). 86 fire pits were also cleaned from the river banks.

Approximately 20 dispersed shooting ranges were identified by Forest personnel and volunteers, and more are suspected to exist. Of these, four sites were adopted by a concerned shooting group (Good Gun Foundation) for annual cleanup work during National Public Lands Day. Approximately five tons of trash were collected from these sites during this event. These sites will continue to be monitored, as they also attract illegal trash dumping and vandalism.

Four miles of non-motorized trail (Trails #392 and #393) were constructed by volunteers and YCC crews, and two miles of existing trail (Trail #311) were reconstructed by YCC crews. About 88 miles of trail maintenance (multi-use and non-motorized) were accomplished by trail crew volunteers, Adopt-a-Trail volunteers and Forest Service crews.

The table below displays the approximate number of visitors to six of the Forest's eight wildernesses during 2004. Only those visitors who stopped to register at a trailhead recorded wilderness use, which undoubtedly underestimates actual use because (1) not every visitor registers, (2) there is not a register at every trailhead, and (3) there are gaps in the data. However, the counts do indicate the relative magnitude of wilderness use on the Forest.

If the trailhead registers underestimate use by a factor of two, annual visitation to the six Wilderness areas is probably about 19,164 visits. The NVUM survey (2002) reported 16,735 total wilderness visits for the Prescott National Forest. There is little visitation to the Apache Creek and Cedar Bench Wildernesses. Estimated use for these areas is approximately 749 visits.

Table 2: 2004 Wilderness Visitation Estimates

Wilderness	Number of Visits
Granite Mountain	3394
Pine Mountain	365
Sycamore Canyon	402
Juniper Mesa	185
Castle Creek	835
Woodchute	3652
TOTAL	**8833**

Due to limited funding, no trails in wilderness were constructed or reconstructed. Trails inventoried during 2004 included approximately 10 miles within wilderness.

Roads and Facilities

During fiscal year 2004, 9 miles of existing Forest roads were reconstructed to improve access and improve watershed condition. 248 miles of the existing 1886 miles of system roads (13%) were maintained to the desired maintenance standard. 7 miles of roads were decommissioned.

Soil and Water

The following projects were implemented this year to improve soil and water conditions:

- Approximately 1,445 acres of juniper on unsatisfactory soils were thinned to improve watershed function by increasing or establishing ground cover.
- An Arizona Water Protection Fund grant was used to complete the Lynx Creek Restoration Project at Sediment Trap #2. This entailed channel and floodplain construction and revegetation. A riparian exclosure fence was constructed around the restoration site to maintain the integrity of the site.
- Arizona State University and the Prescott National Forest are working cooperatively on a monitoring research project to determine the effectiveness of riparian restoration and evaluate riparian function.
- Maintenance work on springs has been completed to maintain their ecological integrity.

In addition, best management practices (BMPs) were applied during fuels reduction treatments, harvest of bug-killed trees, road maintenance, livestock grazing, minerals extraction, special use permits and recreation activities. No water yield improvement treatments were conducted (this monitoring item has not been pursued since the Battle Flat experimental treatments of the 1980's).

Road Assessment Processes (RAPs) continue to be completed to identify roads or road segments that are producing excessive sediment or impacting other resources (such as riparian areas). With this information, an appropriate management strategy can be formulated that improves, relocates or closes problem roads or road segments. Some remedial action, including installation of additional drainage structures, has been taken on high-use roads.

No 5th code watershed analysis was completed, although watershed condition was analyzed as part of fuels treatment and grazing projects' NEPA analyses.

In-stream flow measurements continued in 2004; applications for in stream flow reservations will be made in the future using the data collected.

Watershed monitoring occurred throughout the Forest and was associated with many projects. Approximately 22,900 acres of soil condition monitoring and several miles of riparian monitoring were completed. Road conditions were also monitored to determine to what extent they contributed as a non-point source pollutant.

The Forest continued participation in the Verde Watershed Association and Upper Agua Fria Watershed Partnership.

The annual report to the Arizona Department of Environmental Quality to document Clean Water Act compliance was submitted. This report documents the Forest's use of best management practices for Forest management and Forest user activities.

Timber

Federal regulation requires the Forest to measure and report the amount of saw timber offered annually for sale. The desired condition is that annual sale offerings will be made on a sustained yield basis. The Forest sold approximately 15,073 ccf of saw timber consisting of small sales of Ips bark beetle mortality, fire salvage and green sales (to reduce the density of the stands in order to improve forest health) on 1,008 acres, and 4,422 cords of firewood from various personal use and commercial sale areas.

Monitoring of the acres of intermediate harvest, regeneration harvest, and removal harvest is done to measure treatment prescriptions and effects. The desired condition is a more balanced age class distribution, appropriate growing stock levels, and provision for wildlife habitat needs. I n 2004, the saw timber program consisted of sanitation cuts on 119 acres where dead trees caused by the Ips bark beetle were cut, 539 acres of salvage from the Indian Fire, and 613 acres of intermediate cut on green sales. Acres of harvest treatment, from 1987 to present, are shown in the tables below:

Table 3: Harvest History, Pine Type

YEAR	REGENERATION HARVEST (ACRES)	INTERMEDIATE HARVEST (ACRES)
1987	0	116
1988	8	604
1989	256	931
1990	42	570
1991	0	146
1992	0	304
1993	12	0
1994	20	92
1995	0	0
1996	0	0
1997	92	478
1998	0	0
1999	0	0
2000	162	1082
2001	0	530
2002	0	0
2003	0	0
2004	0	613
TOTAL	**592**	**5,466**

Table 4: Harvest History, Pinyon-Juniper Type

YEAR	REGEN. HARVEST (ACRES)	INTERMEDIATE HARVEST (ACRES)	REMOVAL HARVEST (ACRES)
1987	0	0	
1988	0	0	239
1989	32	47	211
1990	0	166	44
1991	0	0	70
1992	0	0	202
1993	0	0	240
1994	0	0	120
1995	0	0	212
1996	0	0	247
1997	0	0	256
1998	0	0	256
1999	0	0	256
2000	0	0	250
2001	0	0	255
2002	0	0	250
2003	0	0	55
2004	0	0	55
TOTAL	**32**	**213**	**3218**

Wildlife

Bald Eagle

The Forest cooperated with the Arizona Game and Fish Department Bald Eagle Nest Watch Program to monitor nest sites on the Prescott National Forest. One young was successfully fledged at the Coldwater, Ladders and Lynx Lake sites. Breeding attempts at Perkinsville and Towers sites were unsuccessful this year.

Mexican Spotted Owl

During 2004, the Forest monitored all fifteen Mexican spotted owl (MSO) Protected Activity Centers (PACs). Eight PACs were monitored to protocol, while seven had partial monitoring.

MSOs occupied seven of the fifteen PACs. Total detected MSO population was twelve: One single subadult; three single adults; four non-nesting pairs; and one pair that successfully fledged two young. This indicates a stable population trend.

Conifer mortality in 2004 has slowed down in PACs except on Mingus Mountain. Understory vegetation production appears to have increased due to the reduced overstory canopy cover. This has provided an increase in midstory plant diversity and productivity, with more oak, walnut and cherry present. Fuel loading remains high.

Northern Goshawk

Partial surveys were conducted on six post-fledging areas (PFAs), and two were not surveyed at all. No goshawks were found. This continues the downward population trend of the last few years.

Peregrine Falcon

Thumb Butte was monitored for peregrine falcon breeding activity. One young was fledged. The Granite Mountain eyrie was not monitored this year, nor were the three remote territories on the Chino Valley District.

Spikedace

As part of a program begun with Rocky Mountain Research Station in 1994, six of seven permanent sites on the upper Verde River were monitored in the spring and five of the seven sites in fall of 2004 for occurrence of spikedace and information on habitat conditions. Spikedace continued to be absent in fish surveys at all seven sites, as has been the situation since 1996. Monitoring of livestock river crossings at Perkinsville determined that effects to the habitat are minimal.

Management Indicator Species

Large-scale changes to the ponderosa pine, pinyon/juniper, chaparral and grassland-desert shrub communities continued in 2003 due to beetle-caused mortality and drought. These changes will have long-term effects to Tassel-eared squirrel population trends (Abert) (down), goshawk (down), pygmy nuthatch (down); turkey (down); and Hairy woodpecker (up).

Table 5: Management Indicator Species, Trends

SPECIES	HABITAT	POPULATION TREND
Turkey	Ponderosa pine, late seral	Decreasing
Mule deer	Pinyon/juniper/chaparral, early seral	Decreasing
Pronghorn antelope	Grassland, desert shrub	Decreasing
Macroinvertebrates	Riparian, aquatic, late seral	Stable
Goshawk	Ponderosa pine, late seral	Decreasing
Hairy woodpecker	Ponderosa pine, snags	Increasing
Lucy's warbler	Riparian, late seral	Stable
Juniper (Plain) titmouse	Pinyon/juniper snags	Increasing
Pygmy nuthatch	Ponderosa pine, late seral	Decreasing
Spotted (Rufous-sided) towhee	Chaparral, late seral	Decreasing
Tassel-eared squirrel	Ponderosa pine, early seral	Decreasing

Costs

Since the Forest Plan was approved, agency financial management systems and the way funds are allocated to and within the Forest have changed. The Forest is no longer allocated funding based on a percent of our needs to implement the Forest Plan (as was indicated in the original Forest Monitoring Plan). The Budget Formulation and Execution System (BFES) that is now used is based on outputs that can be accomplished within a given constraint of dollars.

Forest budget trends for the last 4 years are as follows:

- $15,152,000 (37.73% increase) - 2001
- $14,426,000 (4.79% decrease) - 2002
- $13,160,000 (8.78% decrease) - 2003
- $11,937,000 (9.29% decrease) - 2004

From 2001 through 2004, the Forest has had a net decrease in funding of 21%.

Section 2 – Progress Toward Desired Condition

Note: All Forest Plan page number references are to the 2004 Republished version of the 1986 Forest Plan, as amended (version 1.1), available on the Prescott National Forest public website (www.fs.fed.us/r3/prescott).

Fire Management

"Provide for fire management support services necessary to sustain resource yields while protecting improvements, investments, and providing for public safety. In as much as possible, return fire to its natural role in the ecosystem." (Forest Plan, p. 14)

FY04 funding was adequate to meet Forest Plan goals. Seasonal factors contributed to a low level of fire suppression on the Forest. There is no output statement in the Forest Plan for prescribed fire. Forest Plan objectives refer to burning in ponderosa pine only as a site preparation method that the Forest has not pursued in recent years due to the shift in timber stand management.

The Forest is becoming successful in returning fire to its natural role in various ecosystems, even with the complexity of implementing this strategy at a larger scale. Use of prescribed fire is expected to continue to increase, with success in fuels reduction and vegetation manipulation.

Heritage Resources

"Heritage resources represent an opportunity for research, education, understanding and enjoyment that enhances their stewardship and protection." (Forest Plan, p. 12)

In general, budgets and staffing for heritage resources management are focused on project implementation, which involves direct on-the-ground work as well as consultation with federal and state agencies and Native American Indian tribes, communities and nations. On-the-ground work includes the inventory, documentation and protection of prehistoric and historic sites. Consultation typically concerns the Arizona State Historic Preservation Office and, to a much lesser extent, the Advisory Council on Historic Preservation. The consultation with Native American tribes, communities and nations has risen dramatically over the last several years in light of new historic preservation legislation. Consequently, the Forest has elected to designate the Forest Archaeologist as the "Tribal Liaison." Due to the pressing matters concerning project implementation and consultation, plus a lack of discretionary heritage resource funding, heritage resource personnel are able to spend little time working on research, educational, and enhancement activities. One exception to this is the use of the “Passport in Time” program that the Prescott National Forest uses. This program allows volunteers and Forest Service archaeologists to work side-by-side in the field to gathering information about heritage resources in the Forest. In FY 04, a location in the Camp Wood area of the Chino Valley Ranger District was selected for study. The Forest also supported archaeological inventory that was conducted under the auspices of the Walnut Creek consortium in the Walnut Creek area of the Chino Valley Ranger District.

The Forest has numerous archaeological sites that are extremely visible and readily available. While the vast majority of sites are important from a research and traditional cultural property standpoint, most do not lend themselves to capital investment for the purposes of interpretation. Nevertheless, opportunities for interpretation do exist, particularly for some of the larger sites and those that fit into a particular thematic category. Clearly, the opportunity for interpretation does not need to rely on a single location, but can focus on some broad pattern of history or prehistory as it relates to the Prescott National Forest.

Insects and Disease

"The Forest is managed with a primary emphasis on healthy, robust environments with productive soils, clean air and water, and diverse populations of flora and fauna." (Forest Plan, p. 11)

The agency focus in dealing with the Ips beetle epidemic was to remove dead and dying trees to reduce the spread of the beetle and to thin stands to promote healthier and more insect-resistant trees. The improved markets for timber products from the Prescott National Forest has increased the Forest's ability to accomplish commercial thinning projects designed to create a more fire- and disease-resistant forest.

Land Management Planning

"Ensure interdisciplinary input and coordination for implementing, monitoring and updating the Forest Plan." (Forest Plan, p. 14)

Teams of interdisciplinary resource specialists are routinely involved in the planning of projects designed to implement the Forest Plan. A wide variety of specialists also provide input to the annual Forest Plan Monitoring and Evaluation Report (this document). The Forest Plan is scheduled for review and updating in fiscal year 2006; an interdisciplinary team will be formed to conduct this review and update.

Lands

"Conduct landownership adjustment, right-of-way acquisition, landline location and special-uses programs to promote efficient management." (Forest Plan, p. 14)

The Forest Lands staff continues to implement efficient land management practices through the effective use of land exchanges, special uses, small tracts, and when necessary, encroachment resolution.

Land Exchange activity for 2004 focused on continuing to move forward with the Gray Wolf Land Exchange. Determining appraisal methodology and carrying out archaeological site assessments has slowed down the exchange process and required an adjustment to the environmental analysis timeline. The Forest Lands staff have also played a supporting role in the progress of two exchanges on the Tonto and Apache Sitgreaves National Forests. The PNF will benefit from these exchanges by acquiring isolated private parcels.

Twenty six special use permits were processed for 2004. Almost one third of the permits processed were easements while one quarter were communication site permits. One emerging issue involves the recent activity of communication site upgrades. This activity has been spurred on by funds made available to law enforcement and fire departments by the Office of Homeland Security.

Noxious Weeds

"Prevent any new noxious or invasive weed species from becoming established, contain or control the spread of known weed species, and eradicate species that are the most invasive and pose the greatest threat to biological diversity and watershed condition." (Forest Plan Amendment #14, Final Environmental Impact Statement for Integrated Treatment of Noxious or Invasive Weeds, January 2005. Page 265)

The systematic approach to inventory and management of invasive plant species described in the Three-Forest Noxious Weed Environmental Impact Statement (quoted above) is the mechanism the Prescott

National Forest will use for weed control. The widespread distribution of invasive plant species has led to the creation of partnerships with members representing State, Federal and local governmental agencies, agricultural interests and the public. The Forest is a member of the Western Yavapai and Verde Valley Weed Management Areas and employees belong to the Southwestern Vegetation Management Association.

Mapping of weed populations continues on the Forest and known populations are being linked to the Terrestrial Ecosystem Survey-based ecological data base to help predict locations that may be infested. When located, the weed populations are added to a weeds atlas that is a part of a statewide mapping of invasive species. In addition to those infestations on the Forest, the atlas for the Forest includes a three-mile buffer zone so that populations threatening National Forest lands can be identified. Incorporating non-federal lands is consistent with the need to manage weeds where they occur and supports the cooperative efforts of Weed Management Areas.

Range

"Provide forage to grazing and browsing animals to the extent benefits are relatively commensurate with costs, without impairing land productivity, in accordance with management area objectives. Cooperate with other agencies and private range landowners to reduce impacts of livestock grazing. Identify and manage areas that contain threatened and endangered species of plants." (Forest Plan, p. 12)

The Forest continues to make adjustments in timing, duration and intensity of grazing to ensure that adverse impacts from livestock grazing do not exacerbate drought effects nor cause reduced land productivity. In this effort, the range of sustainability of grazing is further being defined and will be a valuable tool to support Forest Plan goal attainment. Aggressive monitoring and continual communication with grazing permittees has minimized grazing-caused resource impacts.

In addition, the ecological database (including the nearly complete ecological classification of the Forest) is proving effective at describing an attainable vegetative potential. This attainable potential provides a baseline for environmental analysis and monitoring and is particularly valuable for grazing project NEPA analyses.

Recreation

“Recreation users enjoy a full spectrum of experiences and benefits in appropriately managed facilities and other forest settings. All recreation sites are managed at a capacity of use level that ensures that the natural resources will be maintained at a desirable condition over the expected life of the project and/or activity." (Forest Plan, p. 12)

Based on the 2002 Prescott National Visitor Use Monitoring Survey (NVUM), visitors gave the Forest high marks for visitor satisfaction in all major categories: Developed Day Use and Overnight Sites, Wilderness and general Forest areas. On a scale of 1 to 5, 5 being very good or very important, the Mean Satisfaction Rating for each of the four categories was 4+. Since 2002 the Forest has experienced major mortality of trees in and around the recreation areas due to drought and beetle kill. Visitor enjoyment of the Forest is negatively affected by all the dead trees; however, visitors have been understanding and extremely supportive of Forest efforts to get control of the beetle situation. The Forest’s aggressive hazard tree removal and healthy forest thinning action is nearly complete in our developed sites, and additional vegetation management projects around dispersed sites should be completed during FY 2005. After a slight visitor use reduction in 2003, Forest recreation usage showed a strong resurgence in 2004. The

Forest continues to actively upgrade developed facilities infrastructure, and has a strong construction/reconstruction program in place for dispersed camping sites and trails. All recreation departments continue to rely heavily on volunteer help to augment the Forest Service workforce.

The NVUM Survey in 2002 showed the five most used facilities/areas were non-motorized trails, designated OHV areas, Forest Service office/info sites, scenic byways and developed campgrounds. Current knowledge shows this to now include use of motorized trails by ATVs and dirt bikes. As mentioned above, the Forest continues to upgrade developed facilities; specifically, the Forest has re-acquired a State grant which will enable the completion of the upgrade to the Alto Pit OHV area, which includes several motorized trails.

Recreation planning efforts seek to provide diverse recreation experiences. This diversity was accomplished by providing interpretive and accessible trails. Accessible trail improvement work took place on the west side of Lynx Recreation Trail 311 during the FY 2003 season, and continued into part of FY 2004. Improvement work was also accomplished on the Lions Club Sight-Impairment Trail. Raised relief sculpted animal signs located along the trail were repainted. All the benches along the trail were also repainted, plus the trail edge guide-logs were repaired/replaced and repainted.

Considerable progress has been made in providing interpretation of the Forest through environmental education, both within the trail program as well as through partnerships (i.e., Highland Center for Natural History). A mix of multiple use and motorized and non-motorized trail opportunities will be a primary focus for the next few years.

The Prescott National Forest Forest managed 18 miles of the Verde Scenic River in cooperation with the Coconino and Tonto National Forests. This will add to the diversity of recreational experiences for those visitors who wish to float the Verde River. Diverse camping opportunities exist throughout the Forest at both designated dispersed, undesignated dispersed and developed sites.

There is a severe backlog of maintenance needs on trails, at designated dispersed campsites, and at developed sites (campgrounds, trailheads and picnic areas) due to lack of funding.

Several trained volunteer wilderness rangers will be used in coming years to patrol and monitor use of each wilderness and to provide better data for future Monitoring and Evaluation Reports. The Forest also determined in 2004 that a Forest Service Wilderness Ranger is needed to better coordinate Wilderness activities. Plans have been completed to have someone in place for the 2005 season

Roads and Facilities

"Maintain a transportation system to support resource goals. Construct, maintain and regulate use of Forest Service facilities to protect natural resources, correct safety hazards, reduce disinvestments, and support management activities." (Forest Plan, p. 14)

Budgets for Roads and Facilities continue to decline. The Forest just barely manages to maintain level 3, 4 and 5 roads to meet Highway safety standards concerning signs. Protection of resources is not being accomplished on most level 1 and 2 roads. Regarding administrative facilities, the Forest has managed to reduce some deferred maintenance and most of the buildings are safe for employee use.

Soil and Water

"Protect and improve the soil resource. Provide for long-term waterflow needs through improved management technology. Avoid adverse impacts to the public, Government facilities and all uses in floodplains and wetlands. Restore all lands to satisfactory watershed condition." (Forest Plan, p. 13-14)

As noted in the Range discussion above, the Forest continues to refine its Terrestrial Ecosystem Survey-derived ecological database. The draft document of the Ecological Classification of the Prescott National Forest was complete at the end of FY 2004. This document will describe the range of variability within the Terrestrial Ecosystem Survey map units and allow prediction of the degree of change in response to management, effects of Forest activities, wildfire, insect and disease infestations and the drought that is currently impacting the Forest.

Water quality issues in the Bradshaw Mountains are a concern that is being addressed through abandoned mine reclamation. Priority sites for treatment have been identified by the Environmental Protection Agency (EPA) and implementation is cooperative, with EPA taking the lead on private lands. Rehabilitation of the Blue John mine is in the environmental analysis phase.

Reduction of juniper on unsatisfactory soils continues. Approximately 1,400 acres were treated in 2004. Slash from cut junipers provides organic matter and microhabitat for the establishment of herbaceous ground cover.

"Give riparian-dependant resources preference over other resources. Improve all riparian areas and maintain in satisfactory condition." (Forest Plan, p. 14)

In 2004, the Forest continued fencing and/or repairing fencing around riparian areas and identifying potential needs for fencing or identifying possible management actions that would reduce impacts to riparian areas.

Timber

"Provide for nondeclining sustained yield of timber. Establish improved balance in age class distribution through silvicultural prescribed stand management. Focus on reducing constraining components of stand strata. Protect existing old-growth stands. Improve stand productivity through management. Provide green and dead firewood and other forest products on a sustained yield basis. Timber harvest will be used as a tool to accomplish multiple resource objectives when it is identified as the optimum method through site-specific environmental analyses." (Forest Plan, p. 13)

In general, the Forest is meeting Plan expectations in terms of stand structure and productivity, although achievement of those expectations is not occurring at the rate projected. The Prescott Forest will continue to supply firewood sufficient to meet existing demand, although availability of the resource will probably shift from the Bradshaw Ranger District to the Chino Valley Ranger District. The Ips beetle epidemic had an impact on some of the ponderosa pine stands on the Prescott National Forest. Some of the poorer pine sites on the Prescott were heavily impacted by the Ips beetle epidemic, but the desired condition for this ecosystem has not changed.

During the first six years of the Forest Plan, the number of ponderosa pine acres treated by intermediate and regeneration harvests was relatively constant. Since 1992, treatments have become sporadic; the only large-scale treatments have been the Maverick, Schoolhouse, Dearing and Goldwater Timber Sales. According to the Forest Plan, there are 130,350 acres in the Pine Management Area (Management Area 4 – "MA 4") of which 61,651 acres are tentatively suitable and 30,653 are considered commercial

timberlands. There are also 2,962 acres of commercial timberland in the Woodland and Chaparral Management Areas (MA 2 & 3, respectively). Through fiscal year 2002, approximately 18% of the commercial timberland was treated. In 2004, the timber program continued some focus on salvaging dead and dying beetle killed trees, while moving toward a more normal green tree harvest program. The objectives of the green tree harvest program is to improve forest health and wildlife habitat by thinning overstocked timber stands and to move the forest toward a more balanced age-class distribution..

Mixed conifer areas on the Forest are also included in MA 4. Since the Forest Plan was written, there have been virtually no treatments in mixed conifer or aspen stands to improve stand productivity because of steep slopes and lack of road access. As a result, conifers are replacing aspen in many locations.

One of the concerns during the Forest planning process was "Demand is expected to exceed the Forest's production capability for the sustained yield of pinyon-juniper from accessible lands." A small percentage (0.5%) of the 454,598 acres of juniper/pinyon-juniper in MA 2 (woodland) has been treated since 1986. At a generous estimate of 15 cords/acre, this would be 2,820 cords per year sold, roughly equivalent to 1,410 MBF; the projected harvest in the Forest Plan was 3,401 MBF. There are a number of factors for the lesser volume: reduced demand, due to increased availability and relatively lower cost of electricity and natural gas; and less desirable stands of smaller trees in more remote locations offered for sale. It was also originally envisioned that the Chino Valley Ranger District would be the primary provider of green firewood products. Instead, most of the green firewood volume has come from Sycamore Mesa on the Bradshaw Ranger District. In FY 04, the emphasis in firewood products continued to shift to the Chino Valley Ranger District, as most woodland stands on the Bradshaw District have now been treated.

The significant change from harvesting timber to produce a commodity to harvesting timber for the purpose of restoring or improving forest health is a factor in the protection and recruitment of old growth. This shift has resulted in timber sales consisting of non-traditionally-sized (i.e., not large) trees.

Wildlife

"Manage for a diverse, well distributed pattern of habitats for wildlife populations and fish species in cooperation with states and other agencies. Cooperate with Arizona Game and Fish Department to meet or exceed management goals and objectives in the Arizona Cold Water Fisheries Strategic Plan. Maintain and/or improve habitat for threatened or endangered species and work toward the eventual recovery and delisting of species through recovery plan implementation. Integrate wildlife habitat management activities into all resource practices through intensive coordination. Support the goals and objectives of the Arizona Wildlife and Fisheries Comprehensive Plan, as approved by the Southwestern Regional Forester and the Director of the Arizona Game and Fish Department." (Forest Plan, p. 13)

In 2004, wildlife habitat management continued to be greatly influenced by drought conditions and the unprecedented bark beetle outbreak that has killed thousands of acres of ponderosa pine. The drought also killed many pinyon pines and junipers, and has curtailed growth in the grasslands and chaparral. Wildlife populations will shift accordingly to reflect these changed habitat conditions; wildlife species composition will shift toward those species that favor open forests. Habitats in ponderosa pine and pinyon-juniper vegetation communities will become more patchy and diverse than before, with open areas on south aspects and ridges. Pockets of dense forest will remain in protected canyons and on north-facing slopes.

Wildlife personnel are closely involved with all vegetation manipulation projects, from grazing allotments to fuels reduction and more.

Progress toward improving habitat for threatened and endangered fish species is uncertain. Habitat for threatened spikedace and other native fish in the upper Verde River has been protected for several years from impacting activities, specifically livestock grazing and OHV recreation. In addition, there has been a lack of flood disturbance events since 1995. As a result, aquatic habitats have become narrower and deeper as riparian vegetation has increased and stabilized streambanks. Monitoring data indicate spikedace in the upper Verde River have apparently been eliminated by non-native predator fish. The USDA Forest Service Rocky Mountain Research Station continues to investigate relationships between native fish and nonnative fish, flood disturbance events and Forest management practices. This partnership is helping to develop crucial information about management of native fish habitat on Prescott National Forest Lands.

Section 3 – Barriers To Effective Monitoring

Heritage Resources

Budget constraints and a lack of personnel have prevented comprehensive monitoring of all sites eligible for and listed as National Register sites. The number of sites monitored in 2004 is slightly lower than has occurred annually in the Prescott National Forest. Criteria used to determine which projects will be monitored include the density of sites in or near the project area, the magnitude of the project, and the National Register eligibility of the sites. Forest Plan monitoring has been effective in showing that overall protective actions have worked well; however, some mishaps have occurred, chiefly due to a lack of communication or the failure of a site not being identified. In some cases, site protective markers have been removed by the public, not realizing what these protective markers meant. The problem of site markers being removed is a challenging one, particularly because, as the population increases and more homes are built along the "interface" between the private land and National Forest land, more people can readily access the Forest via their own property or from nearby trails. In a related matter, when protective site markers (or any markings, for that matter) are encountered by the public in the Forest, some individuals may believe that these portend some sort of "development;" therefore, they may remove markers, including those that mark archaeological resources. This is a problem that will probably remain for some time to come, which will require heritage resource personnel to continue to check areas several times until a project is completed.

Funding has, and will probably continue to be an issue with monitoring. As project work plans are developed at the beginning of each Fiscal Year, monitoring funds need to be figured into the project work plans.

Significant time and effort have been focused on pre-project planning, coordination with the project manager, consultation with the State Historic Preservation Office and Native American tribes, communities and nations, as well as follow-up record keeping. Individually these items are not barriers to effective monitoring, but taken together, they have created a significant impact on the time available for monitoring activities and our proactive efforts to manage heritage resources. To be sure, monitoring is recognized as an important, even vital, activity, though this reality is not reflected in current funding mechanisms, staffing or priority work plans.

Noxious Weeds

Public acceptance of the need to manage noxious weeds has generally been high in Yavapai and Coconino counties, but this need is less understood by Forest users from urban communities.

Range Management

Budget constraints and a lack of personnel have prevented extensive monitoring of the range resources.

Recreation

One area of Recreation monitoring that needs improvement is determining day-use site usage to a higher confidence level. Techniques are available, but expensive; funding is the barrier. The budget shift at a national level to a Forest Health Restoration emphasis will directly impact other program management capabilities.

Soil and Water

Budget constraints and a lack of personnel have prevented extensive monitoring of the soil and water resources.

Wildlife

As in previous years, the items identified in the Forest Plan for monitoring are not always relevant to determining progress in meeting Forest Plan goals. Monitoring non-game birds as a measure of riparian health is probably not useful in measuring accomplishment of Forest goals. Reporting acres treated and volume of wood sold does not provide a means to measure and evaluate forest health. To make monitoring useful, more needs to be done to accurately determine what is important, relevant and meaningful to measure. Other items are not practical or are difficult to measure. Wildlife population monitoring is an enormous undertaking – cause and effect relationships are hard to determine because of extrinsic factors (e.g., neo-tropical migratory bird populations may be influenced by factors in other states or countries). Such an undertaking needs to be closely coordinated with State and other agencies. To be effective, monitoring needs to be simple and easily implemented while providing a true picture of progress toward an objective. There is a need to adapt monitoring so changes can be made in on-going programs/projects as soon as potential problems are identified.

All of these needs will be addressed in future Forest Plan amendments, the upcoming Forest Plan revision, and through other changes.

The greatest impediment to achieving wildlife goals is the amount of time Wildlife staff spend addressing litigation issues and preparing environmental analyses and environmental analysis-related documentation in support of other programs' projects. The requirements for environmental documentation have become very complex for wildlife and are changing frequently. In addition, litigation-inspired legal interpretations of MIS analysis requirements and migratory bird analysis requirements added by Executive Order in 2001 continue to add to the environmental analysis workload. It is estimated that more than 50% of Wildlife staff time is now spent participating in litigation-driven issues instead of implementing field projects that directly benefit wildlife.

Section 4 – Emerging Issues

Fire Management

As the Forest shifts to the 401 professional firefighter series, the cost of training firefighters will increase. The training requirement for the 462 series is changing as well.

Fire Program Management that will replace the NFMAS system in 2007 will look at interagency management of lands and create a new budget process.

Retention of the work force continues to be a challenge.

Heritage Resources

Native American consultation procedures have changed under new Federal regulations implementing Section 106 of the National Historic Preservation Act. The Forest must now formally consult with tribes, communities and nations that show an interest in the management practices of the Prescott National Forest. To that end, Native American tribes, communities and nations have developed heritage resource programs that regularly review Forest Service projects through the Schedule of Proposed Actions and other notices. Moreover, Native Americans have not only shown interest in specific sites where their ancestors lived, but also in large areas where certain cultural practices took place. The future challenge for the Forest Service is to work effectively with tribes, communities and nations so that these areas can be identified and managed in such a way as to show Forest Service sensitivity to tribal values that are based in the past but are expressed in the present. As such, it behooves the Forest Service to begin thinking about funding and completing ethnographic studies for those tribes, communities and nations that claim affiliation with lands contained within the Prescott National Forest boundary in order to better understand where these areas exist.

Another emerging issue that was briefly mentioned earlier is the general increase in the population of Yavapai County and its effect on the archaeological resources of the Forest. As more people use the Forest, the chances become greater that sites will be impacted. There is increased use caused by technological changes, such as the rise in all-terrain vehicles (ATV). These allow people to access more remote locations of the Forest, thereby allowing them to visit sites that were once protected by their inaccessibility. In addition to providing greater access to sites, ATV use has spawned new trails around the Forest and, in some cases, altered existing trails. When new trails are created or when existing trails are altered, heritage resources are in danger of being affected by direct impacts.

As the population of Yavapai County increases and the public use of the Forest correspondingly increases, there will be a greater need to augment our interpretation of heritage resources. Disseminating information to the public about heritage resources can be a key component in the fight against direct and indirect impacts to prehistoric and historic sites.

Insects and Disease

The most critical resource issue facing the Forest is to treat dense, overstocked stands to prevent another extensive insect attack in ponderosa pine. There is an urgent need to treat these stands in order to improve the health of the pine stands and to reduce the potential for crown fires in these stands. The ability to treat many of these stands depends on the ability of the timber industry to purchase, remove and utilize the wood. The increased timber industry has been able to purchase and harvest the timber we have

offered. This will need to continue because the ongoing drought situation in the Southwest will enhance and continue the potential for another Ips beetle epidemic and associated pine mortality.

Noxious Weeds

Issues about management of noxious weeds are being addressed through project NEPA analysis, but uncertainties about the ability to use pesticides remain to be resolved. Infestations are frequently found in areas with human activity or disturbance such as roads, trails, recreation-areas and adjacent to private land. These same areas are potentially contentious for pesticide use because of human presence. Other disturbed areas (as a result of wildfires or fuels reduction treatments) create weed habitat and monitoring should be conducted. Drought may also favor some non-native plant species such as salt cedar.

Range

Livestock management is a balancing act between sustaining resource conditions and allowing stocking of grazing allotments. The unprecedented (in recent times) conditions are affecting the grazing permittees' decisions on livestock ownership and financial planning as well as investment in projects on Forest lands. While the effects on forage plants (resulting from both management and natural causes) can be and are estimated by monitoring, the duration of the current dry conditions may have lasting impacts that are not entirely understood. In addition, the determination of when conditions are suitable for restocking has been complicated by fluctuations in precipitation. As a result, Forest range managers have been forced to make short-term management decisions.

Recreation

Population increases in the north Williamson Valley area are continuing to create additional pressures for recreation use and a need for more developed recreation opportunities in the Walnut Creek/Camp Wood area. Similarly, rapid population growth in the Paulden and Chino Valley communities is impacting the Upper Verde River ecosystem through increasing dispersed recreation activities in this area, including camping, picnicking and off-highway vehicle use. The Chino Valley District Ranger requested that an analysis of the impacts of dispersed recreation on the Upper Verde River be undertaken. Initial studies and limited surveys took place in 2003. The Bear Siding Road was realigned and plated, which increased dispersed recreation access to a popular segment of the Upper Verde River

As the population in Yavapai and adjacent counties increase, increased visitation to the eight Forest wildernesses is expected. Good trail maintenance, signing and trailheads will be needed for visitors as part of the Forest's resource goals. At major trailheads in the wilderness, wilderness interpretation is necessary so the visitor can "experience, protect and preserve the unique wilderness character of each wilderness" (Forest Plan 1986).

Large trees in developed and dispersed recreation sites are succumbing to the Ips bark beetle epidemic, creating safety issues and a degradation of recreation experiences. Treatment options currently being used include tree salvaging and tree thinning, are mainly confined to the developed recreation sites based on funding limitations and priorities. A major effort was begun and completed in 2004 to remove the larger, dead hazard trees throughout the developed recreation sites. Near the end of 2004, a forest health improvement project was begun to remove unwanted smaller trees from all the developed sites in the Prescott Basin; that project will be completed in late 2005. Plans have been made to utilize Forest fire

crews during the winter of 2004-2005 to begin falling large, dead trees around dispersed camping sites and along some popular hiking trails.

The national effort within the Forest Service to centralize and realign the Budget and Human Resource Programs will have a major effect in operation of all program areas over the next few years.

Roads and Facilities

Trends in the facilities budget indicate that the Forest will not be able to maintain facilities in a safe manner.

Trends in the roads budget indicate that the Forest will not be able to do maintenance on level 1 and 2 roads for resource protection. Most of the funding will be used to maintain level 3, 4 and 5 roads so that they meet highway safety standards.

Soil and Water

Climatologists state that Arizona had been experiencing above-normal precipitation from the mid-1970s until late 1995 and may have been in a wet cycle for several hundred years. The Colorado River adjudications were made during this wet cycle, when flows were 150% of normal. The current drought is severe, but normal precipitation may be between the recent extremes which may not provide enough water to sustain regional lifestyles. This may put pressure on public lands to examine ways to increase water production and/or in-stream storage, a situation that could change management emphasis.

A goal of the Forest Plan was to increase water production in chaparral and studies were conducted in the Battle Flat research area as well as other locations on the Forest. Findings concluded that increases, although small, were possible, but costs were high.

In-stream storage within the Verde River drainage has for many years been thought to be inadequate by Salt River Project personnel, although actions that would lead to more storage have been tabled since the early 1980's. However, as demands for water increase, there could be demands placed on the Forest to revisit the feasibility of increasing water production and in-stream storage.

Timber

The most critical resource issue facing the Forest is to treat dense overstocked stands to prevent another extensive insect attack in ponderosa pine. There is an urgent need to treat these stands in order to improve the health of our pine stands and to reduce the potential for crown fires in these stands. The increased timber industry infrastructure has allowed industry to purchase, remove and utilize the wood we have offered. This will need to continue because the ongoing drought situation in the Southwest will enhance and continue the potential for another Ips beetle epidemic and associated pine mortality, as well as for another large fire like the Indian Fire.

Wildlife

There is continuing debate and research on the restoration of the upper Verde River system and what constitutes "good" aquatic habitat for spikedace and other native fish in the presence of non-native fish species. The restoration to a more stable aquatic system may favor established populations of non-native, predatory fish over native species in the absence of any active management to reduce or control their presence. A better understanding of the interactions of native and nonnative fish, natural disturbance events (i.e., flooding), livestock grazing and aquatic habitat changes would greatly aid the Forest's ability to manage for multiple use of the land. In addition, increased population and urbanization around the Forest has led to increasing public pressure (e.g., recreation) on threatened and endangered species' habitats, especially in and along the Verde River.

Pronghorn are receiving increasing attention statewide as their habitats decline. There was a good fawn crop in 2004 in herds on the Forest, but the threats still exist (i.e., optimum habitat on private land continues to be developed for housing with subsequent roads and fences; predation occurs at high levels; human disturbance is increasing; and forage conditions are affected adversely by drought).

Pronghorn are indicators for the suite of species that occupy grasslands. Grasslands are being lost at a high rate due to urbanization. Yavapai County is the fastest growing rural county in the United States. This makes conservation of the remaining grasslands very important. The Forest manages only a small proportion of the true grasslands; it is important that these areas be managed to benefit pronghorn. Restoration of fire-dependent ecosystems (including the grasslands) is a high priority for the Forest. Future plans include removal of juniper and implementation of prescribed fire to keep grasslands open and free of invasive woody species.

Other emerging wildlife issues include the following:

- Noxious weeds are expanding and could eventually impact wildlife habitat.
- Effects of drought and beetle-killed ponderosa pine forests on terrestrial wildlife species' habitat: Timing and intensity of potential wildfires as a result of increases in fuel levels could threaten Mexican spotted owl and northern goshawk habitat and populations on the Forest.
- The pumping of groundwater on private lands may begin reducing flows in the Verde River on the Forest.
- Increase in off-highway vehicle use on some areas of the Forest threatens wildlife and fish species and their habitats.

Section 5 – Recommendations

There are no recommendations for changes to the Forest Plan as a result of the 2004 monitoring effort, given that the analysis to update the Forest Plan ("revision") will begin in formally in fiscal year 2006. Some initial analysis has already begun.

Section 6 – Certification of Forest Plan Sufficiency

I have reviewed this annual Forest Plan Monitoring and Evaluation Report for Fiscal Year 2004 and determined that:

- While management activities on the Forest continue to lead toward desired conditions, the ongoing drought compounded with the recent ponderosa pine Ips beetle epidemic will require new management strategies and ongoing attention.
- The report is responsive to monitoring information as identified in Chapter 5 of the 1986 Prescott National Forest Plan. The monitoring plan and monitoring activities conducted by the Forest are based on National Forest Management Act regulations and Forest Service Manual guidance.
- An amendment addressing wildland fire use and fuelwood management is currently underway on the Forest. Forest Plan revision will begin in fiscal year 2006.

Therefore, I have determined that the 1986 Forest Plan as currently amended remains sufficient (although in need of further change) to guide Prescott National Forest implementation activities over the next fiscal year.

***/s/* Michael R. King** **March 31, 2005**

Michael R. King, Forest Supervisor Date