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Region



2006 Forest Plan Monitoring and Evaluation Report

Prescott National Forest



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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 following standards and guidelines. This report documents and evaluates the results of the monitoring that occurred during fiscal year 2006 (October 2005 through September, 2006) 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.

Section 1 – Resource Monitoring Summary

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 below average. Fire season began early in the spring, but summer monsoons began on schedule preventing what could have been an above average fire season in number of acres burned. Monsoons were within normal moisture levels and time periods. This produced a late-season abundance of grasses and herbaceous cover in the shrub and grasslands and helped to reduce the impacts of long-term drought in forested areas.

Table 1 shows moisture amounts received at various weather stations across the Prescott National Forest (PNF) during the course of fiscal year 2006.

Weather Station	2005	2006			TOTAL
	Oct 1-Dec 31	Jan 1–Mar 31	Apr 1-Jun 30	Jul 1-Sep 30	
Iron Springs	1.25”	1.52”	3.14”	4.44”	10.35”
Crown King	1.40”	1.60”	1.42”	7.30”	11.72”
Verde	.59”	.65”	.32”	7.03”	8.59”
Cherry	2.20”	1.25”	1.26”	9.98”	14.69”

Lower than normal fall and winter moistures contributed to maintaining and increasing stress levels in vegetation caused by an on-going, long-term drought. All indications pointed to an above-average fire season with an abundance of grasses to support and carry wildfires. Timely and adequate summer monsoons temporarily alleviated the threats from drought-stricken forest vegetation.

The Forest implemented campfire and smoking restrictions in mid-June. Early and abundant monsoon moistures permitted restrictions to be lifted by the end of July. 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 for most fires that started on Prescott NF lands.

There were a total of 95 fires on the Prescott NF during FY06; 56 were lightning-caused and 39 were human-caused. Table 2 displays the number, size, and cause of these fires, the majority of which were less than 1 acre in size.

FIRE NAME	FIRE SIZE (Acres)	NUMBER OF FIRES	CAUSE
	< 1	31	Human
	< 1	38	Lightning
	1 - 100	7	Human
	1 - 100	14	Lightning
Cornfield	1143	1	Human
Rincon	250	1	Lightning
Pipeline	220	1	Lightning
Tiger	5143	1	Lightning
Houston	197	1	Lightning
TOTAL		95	

Large fire activity throughout the nation was light during the first half of the summer, but picked up during the latter half due to low winter moisture levels in the northern half of the West. Off-Forest fire assignments for the Prescott Hotshots were above normal with an active July, August and September. Shortages of all types of fire-fighting resources occurred during the late summer months with numerous large fires occurring in the northern Rockies.

Annually, the Forest monitors fire and fuels conditions on treated, untreated, and wildfire sites in various vegetation types to evaluate vegetation trends. This program was implemented in 1999. Currently, there are 13 permanent plots established in the pine type, seven plots in the chaparral type, and three control plots. Nine of the pine plots have been burned, and all seven of the chaparral plots have been brush-crushed. Plots are monitored right after the treatment, and at one, two, and five year intervals. Data collection is up-to-date and on schedule. These plots help determine how well objectives are being met, or if modifications are needed during future treatments to help move Forest lands towards desired conditions.

In 2006, 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; and to construct fuel breaks to support future prescribed burn activities. Approximately 298 acres of mechanical treatment were contracted to construct fuel breaks in chaparral vegetation.

The Forest completed 9,502 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 3 displays the number of acres treated by year and vegetation type since the Prescott NF Land and Resource Management Plan was approved.

Table 3 - Prescribed Fire History Acres Treated by Vegetation Type				
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
2005	0	5,483	667	0
2006	0	4,300	5,500	0
TOTAL	38,544	82,184	14,439	3,008

Heritage Resources

The Prescott National Forest (PNF) manages 36 sites 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. All 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 as 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 having altered their historic integrity.

There were 59 heritage resource projects completed in fiscal year (FY) 2006 on the Forest, resulting in the discovery of 133 archaeological properties. In addition to discovering new archaeological properties, 25 previously recorded sites were monitored in relation to project activities. Of the projects that were surveyed, 25 (43%) resulted in direction to manage for the presence of historic and prehistoric resources. This is slightly less than 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 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 93 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 sources related to site integrity. The first involves environmental factors, 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 2006, there were several reports of vandalism, but no individuals were identified. This number is slightly elevated from the previous year.

In addition to monitoring National Register Properties, monitoring efforts included checking a number of archaeological sites that fell within timber harvesting areas. This work included relocating and re-flagging archaeological sites.

Monitoring occurred on several smaller projects, including trails projects, road improvement projects, mining projects, historic site improvements, and others. The protection of historic Yeager Canyon Ranger Station was accomplished by collecting refuse and placing a protective barrier to limit access to the site. The site continues to be monitored. Some monitoring efforts do get reported because they involve quick "spot checks" of known heritage resources when the opportunity arises while either going to, or coming from, project areas. Overall, monitoring efforts on the PNF have proven to be effective and helpful in our continuing efforts to protect prehistoric and historic resources.

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.

Steve Dudley, Biological Technician, Forest Health, Arizona Zone, flew over the Prescott NF and adjacent state and private forested lands on August 21-22, 2006. The Aerial Detection Survey 2006, results for the entire forest detected Ponderosa pine mortality on 171 acres for the season. The primary insect affecting these acres was Ips, however, Western pine beetle is endemic to the ecosystem and does impact the Ponderosa pine but on more of individual tree basis. The acres impacted in 2006 are slightly higher than in 2005, most likely due the lack of winter precipitation; however the populations of bark beetles are still within endemic levels.

Higher altitude true firs and Douglas-firs are still experiencing mortality. We have recorded 15 acres of mortality over some of the higher elevations.

Mistletoe continues to persist in some pine stands, primarily in the Sierra Prietas, but does not pose immediate threat to forest resources on the whole. The mortality in pinyon pine stands in 2006 was near normal due to the near average moisture.

Lands

No rights-of-way were acquired in 2006.

Noxious Weeds

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. 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.

Range Management

Livestock grazing capacity is monitored in two ways:

1. Through inspections to determine short-term needs for adjustment in stocking, and
2. Through use of data collected for analysis of grazing projects as required by the National Environmental Policy Act (NEPA).

Short term adjustments in stocking levels are based on forage plant vigor and production and livestock water availability.

Rangeland conditions are difficult to measure directly on an annual basis because of climatic conditions which affect plant species diversity, herbaceous growth and litter production. Therefore, indicators of changes in condition, such as type and quantity of plant species present, are used to compare plot data from the Forest's ecological inventory completed in 2002 as well as current rangeland health field inspection information with Terrestrial Ecosystem Survey information to estimate site potential and changes in plant and soil condition. This combination of management tools generally resulted in favorable condition assessments, with possible exceptions near watering locations where livestock, wildlife and recreational activity typically concentrate. Administrative actions are taken, where needed, to ensure that rangeland condition is not in a declining trend.

This year an estimated 259,000 acres were evaluated and administered to standard across the Forest, using the management tools as described above to evaluate rangeland

conditions and trends. All range allotments with Threatened and/or Endangered species were monitored for compliance with Endangered Species Act Section 7 consultation agreements, and were found to be in compliance.

Livestock numbers increased in 2006 with authorized use stocking levels increasing to 14, 208 head of livestock, which is an estimated 15% increase over the previous year, 2005. This increase is attributed to the outstanding summer growing season in 2006. Authorized numbers for 2006 were still well below permitted numbers, and this is a response to the ongoing ten-year drought.

In 2006 ten grazing allotments had NEPA completed and management decisions made to continue livestock grazing on the Forest. Table 4 below lists these range allotments and the type of NEPA completed on each.

TABLE 4. RANGE ALLOTTMENT NEPA FOR 2006	
ALLOTMENT NAME	TYPE OF NEPA ASSESSMENT
Toohy	Categorical Exclusion (CE)
Walnut Creek	Categorical Exclusion (CE)
Bald Hill	Environmental Assessment (EA)
Copper Canyon	Environmental Assessment (EA)
Squaw Peak	Environmental Assessment (EA)
Young	Environmental Assessment (EA)
Brady	Environmental Assessment (EA)
Big Bug	Environmental Assessment (EA)
Cold Springs	Environmental Assessment (EA)
Burnt Ranch	Environmental Assessment (EA)

Recreation

Developed recreation facilities' usage was up approximately 15,500 visits over 2005, despite continued higher prices for nearly everything recreationists purchase. Higher prices on a national level may have contributed to people recreating closer to home. Additionally, improved and more detailed record keeping on the Forest's part may have contributed to this increase. Developed recreation sites experienced an overall increase in recreation visitation. Lynx Lake campground continues to be the most popular recreation site on the Prescott National Forest with a 56% occupancy rate.

Developed recreation usage continued to be concentrated on weekends during the spring, summer and early fall. During 2006, approximately 206,164 visits occurred. This number is based on extrapolated data compiled from paid fee envelopes and personal observations by recreation staff. There were approximately 57,385 overnight camping visits, including group sites, and 147,779 day-use visits. The overall recreation visitor day (RVD) total for 2006, based on an RVD multiplier of six for an average two-day camping stay, reached 488,000. This total exceeds the current Forest Plan estimate of 380,000 annual RVDs for the third season in a row. Despite these numbers, there still appears to be available capacity in the current developed recreation facilities. During the peak recreation summer months, campground occupancy can average 80-100% (on weekends), but occupancy over the entire seven-month season is considerably less, as indicated in Table 5.

Table 5– 2006 Per cent Occupancy		
Wilderness	2006 % Annual Occupancy	2005 % Annual Occupancy
Groom Creek Horse Camp	23	23
Hilltop Campground	33	23
Yavapai:	28	28
Lower Wolf Campground:	32	24
Lynx Lake Campground:	56	42
Mingus Mountain:	32	Unavailable

The Prescott NF has two developed off-highway vehicle (OHV) areas: Alto Pit and Hayfield Draw. Actual use figures for both OHV areas totaled about 12,880 visits based on an analysis of fees collected.

There are 115 designated dispersed campsites within the Prescott Basin. One of the designated dispersed camping areas was closed because, in the same area, a developed campground was recently constructed and available for use. Forest-wide dispersed site monitoring was conducted from April through October in 2006 by fire prevention and forest protection officer patrols. Prior to April and after October, there are little or no patrols of dispersed sites.

Approximately 20 of these designated sites have been closed, moved, or obliterated due to impacts from logging, firewood gathering, or changes in camping priorities. Volunteers are assigned the responsibility of inventorying, monitoring, and maintaining each site. Fire Prevention and Forest Patrol Officer patrols helped monitor these sites, concentrating on fire prevention, camping limits/compliance, and education. Volunteers are used for maintaining dispersed camp areas year-round and report anything they feel is unusual about the use of dispersed camp areas and the condition of the area itself. In 2006, as in 2005, many of these sites were heavily impacted by fuels treatments (brush crush) and timber harvesting, leading to a need to re-evaluate the campsites.

In 2006, the Prescott National Forest managed 41 miles of Verde Wild and Scenic River in cooperation with the Tonto and Coconino National Forests. Nine river trips were made with other recreation managers and volunteers. On these trips, a variety of work was done including: removal and clean up of 35 fire rings, removal of trash, mapping and identifying needed information using GPS, visitor contact (182 visitor contacts on river), installing wilderness signs and a kiosk for posting river runner’s information, and inventorying and documenting aquatic invasive weeds.. A total of 29 bags of trash were filled and removed. The following large items were also removed: 59 tires, and over 2,000 pounds of scrap metal, fencing wire and cable.

Approximately 60 dispersed shooting locations have been identified by Forest personnel and volunteers, and more are suspected. Four of these sites were adopted by a concerned shooting group (Good Gun Foundation) for annual cleanup work during National Public Lands Day. The Good Gun Foundation and other volunteers filled a 40 yard dumpster with collected trash as part of the clean up. These sites will continue to be monitored as they attract illegal trash dumping and vandalism.

Four miles of non-motorized trail (#332 extension, #400, and #93 reroute) and 4 miles of motorized trail (#619) were re-constructed/constructed by volunteer crews and a Forest Service Enterprise Team. Trail crew volunteers, Youth Corp crews, Adopt-a-Trail volunteers, and Forest Service crews conducted maintenance on approximately 88 miles of trails (multi-use and non-motorized).

Table 6 displays the approximate number of visitors to the Forest’s eight Wilderness areas during 2006. It also shows the Recreation Opportunity Spectrum rating for each wilderness area. Only visits recorded at a trailhead register are included in these totals. This 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.

Table 6– 2006 Approximate Wilderness Visitation & ROS Rating		
Wilderness	Number of Visits	ROS Spectrum
Granite Mountain	5,650	Bordering on SPNM
Pine Mountain	402	P
Sycamore Canyon	140	P
Juniper Mesa	301	P
Castle Creek	380	P
Woodchute	2323	P
Apache Creek & Cedar Bench	120	P
TOTAL	9,316	

The 2002 National Visitor Use Monitoring survey reported 16,735 total wilderness visits for the Prescott National Forest. Using an expected 7% annual increase in wilderness visitation (PNF LMP pg. 82), visitation in 2006 to the eight Wilderness areas can be estimated at about 22,000.

No trails in wilderness were constructed or reconstructed. Approximately 30 miles of trails were maintained in wilderness.

Roads and Facilities

During fiscal year 2006, 0.5 miles of existing Forest roads were reconstructed to improve access and improve watershed condition. 115 miles of the existing 1897 miles of system roads (6 %) were maintained to the desired maintenance standard. 3 miles of roads were decommissioned—removed from the Forest road inventory.

Soil and Water

Monitoring of soil and water resources was predominantly connected with project work that was not necessarily affiliated with watershed targets. Soil condition monitoring occurred on approximately 20,688 acres forest-wide and 8.5 miles of riparian stream course monitoring occurred as well. The majority of this monitoring was affiliated with rangeland analysis. Soil condition monitoring utilized the region 3 protocol and riparian conditions were analyzed using the proper functioning condition assessment. These findings were integrated and considered in the project management prescription to ensure a progress towards desired conditions.

Monitoring of the Arizona Water Protection Fund grant of Lynx Creek Restoration Project at Sediment Trap #2 was completed in partnership with Arizona State University. The findings suggest that the channel underwent many adjustments predominantly from flood events but the general recovery is satisfactory. Monitoring of the Arizona Water Protection Fund grant of Lower Lynx Creek is continuing in partnership with Arizona State University. The monitoring of this project is ongoing and entails data collection of vegetation response, channel dynamics, soil temperature, and ground water levels. The riparian enclosure at Brown Springs is part of an Arizona Water Protection Fund grant and the monitoring is still in progress.

Recreation monitoring affiliated with watershed resources occurred on Hilltop campground to determine the success of seeding and erosion control efforts. The seeding efforts were successful and the erosion

control is stabilizing the sites. Miller Creek was monitored in affiliation with a developed recreation project i.e. Thumb Butte Day Use. The findings of the monitoring were used to develop site specific best management practices to maintain the integrity of the riparian function of Miller Creek.

Post and pre-construction monitoring occurred on abandoned mining projects affiliated with Comprehensive Environmental Response Compensation and Liability Act (CERCLA). Post monitoring results of the McClure’s erosion control indicates the site is stable and revegetating well. Monitoring results of the Blue John mine has resulted in implementing additional erosion control measures to stabilize the site. Pre-construction monitoring of French Lily and Golden Belt occurred and the information regarding the watershed resource needs were integrated into the construction plans.

Burned Area Emergency Response monitoring occurred on all wildland fires greater than 300 acres. The monitoring revealed the need to implement soil and water conservation measures to minimize the potential impacts upon the values at risk.

Instream flow measurements continued in 2006 on 5 perennial stream stretches. Administrative monitoring of best management practices affiliated with mining operations, prescribed fire and fuel management, rangeland management, timber harvesting, roads, recreation sites, and roads continue to be implemented. Findings of this monitoring are ongoing and used to make adjustments to ensure the protection of the watershed resources.

A 2006 report was compiled for the Arizona Department of Environmental Quality to document Clean Water Act Compliance through the use of best management practices (BMPs). This report entailed monitoring of these BMPs.

The Forest continued participation in the Verde Watershed Association, and joined the City of Prescott Mitigation Committee, and the Verde River Basin Partnership.

Timber

Federal regulation requires the Forest to measure and report the amount of sawtimber offered annually for sale. The desired condition is that annual sale offerings will be made on a sustained yield basis. The Forest sold approximately 10,474 CCF (CCF =100 cubic feet) of sawtimber. These sales consisted of green sales to reduce the density of the stands in order to improve forest health on 956 acres, and 4970 cords of firewood from various personal use and commercial sale areas.

Acreage of intermediate harvest, regeneration harvest, and removal harvest monitoring 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. In 2006, the sawtimber program harvested 451 acres of intermediate cut and 13 acres of regeneration cuts. Tables 7 and 8 show the number of acres of harvest treatment from 1987 through 2006.

YEAR	Regeneration Harvest	Intermediate Harvest
1987	0	116
1988	8	604
1989	256	931
1990	42	570
1991	0	146
1992	0	304
1993	12	0
1994	20	92

Table 7 Harvest History in pine type (acres)		
YEAR	Regeneration Harvest	Intermediate Harvest
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
2005	5	738
2006	13	451
TOTAL	597	6655

Table 8 Harvest History, Pinyon-Juniper type (acres)			
YEAR	Regeneration Harvest	Intermediate Harvest	Removal Harvest
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
2005	0	0	40
2006	0	0	67
TOTAL	32	213	3325

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 Tower, Perkinsville and Coldwater nest sites, while the Ladders and Lynx Lake sites fledged two.

Mexican Spotted Owl

During 2006, no monitoring was completed within Protected Activity Centers (PACs) and no projects were implemented within those areas.

Conifer mortality in 2006 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 mid-story plant diversity and productivity, with more oak, walnut and cherry present. Fuel loading remains high.

Northern Goshawk

No monitoring was conducted in Fiscal Year 2006. Past years' monitoring indicates a decreasing population trend of the last few years.

Peregrine Falcon

Thumb Butte and Granite Mountain sites were monitored for peregrine falcon breeding activity by both volunteers and the Arizona Game and Fish Department. While the Thumb Butte territory was occupied by a pair, nesting success could not be confirmed. Two nestlings were observed in July on Granite Mountain. The three remote territories on the Chino Valley District were not monitored.

Yellow-billed Cuckoo

No population monitoring was completed in Fiscal Year 2006.

Spikedace

As part of a program begun with Rocky Mountain Research Station in 1994, all seven permanent sites on the upper Verde River were monitored in the spring and two of the seven sites in fall of 2006 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.

Gila chub

Habitat conditions in Upper Water Spring (Indian Creek) and a portion of Sycamore Creek were altered by sediment and ash runoff due to the Cave Creek Complex Fire in summer of 2005. Gila chub habitat conditions were monitored in portions of Indian, Sycamore, and Little Sycamore creeks on the Prescott National Forest in 2006. Riparian and aquatic conditions have stabilized along Upper Water Spring/Indian Creek affected by the Cave Creek Complex Fire. Visual observations of the Gila chub population revealed the typical distribution of fish along this reach of the creek .

Management Indicator Species

Population trends for Management Indicator Species have leveled off during 2006 after a decline in 2005 due to insect infestations, drought and related vegetation changes and tree mortality. An MIS update report will be completed in Fiscal Year 2007.

TABLE 9. MANAGEMENT INDICATOR SPECIES, TRENDS (2003 MIS REPORT)		
SPECIES	HABITAT	POPULATION TREND
Turkey	Ponderosa pine, late seral	Stable
Mule deer	Pinyon/juniper/chaparral, early seral	Decreasing
Pronghorn antelope	Grassland, desert shrub	Stable
Macroinvertebrates	Riparian, aquatic, late seral	Stable
Goshawk	Ponderosa pine, late seral	Decreasing
Hairy woodpecker	Ponderosa pine, snags	Stable
Lucy's warbler	Riparian, late seral	Stable
Juniper (Plain) titmouse	Pinyon/juniper snags	Decreasing
Pygmy nuthatch	Ponderosa pine, late seral	Stable
Spotted (Rufous-sided) towhee	Chaparral, late seral	Stable
Tassel-eared squirrel	Ponderosa pine, early seral	Unknown

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)

FY06 funding for fire suppression and fuels management activities was adequate to meet Forest Plan goals. Management Direction within the Plan states, "Provide for fire management support services necessary to sustain resource yields while protecting improvements and investments, and providing for public safety." Seasonal factors contributed to a low level of fire suppression needs on the Forest and were well within Desired Conditions.

The Plan also states, "In as much as possible, return fire to its natural role in the ecosystem." During 2006, the only authorized use of wildland fires on the Prescott NF was in Wilderness areas. There were no wildland fires managed as fire-use opportunities to meet resource objectives during this time. There were strong efforts made to reduce fuel loadings, primarily in wildland urban interface areas, and to help safely manage fire-use opportunities in the future.

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 vegetation and fuels management to restore fire-adapted ecosystems.

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 occurs on a regular basis by the forest's Tribal Liaison. Consequently, the Forest has elected to designate the Forest Archaeologist as the "Tribal Liaison."

Due to 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, education, and enhancement activities. Exceptions to this include archaeological inventory that was conducted under the auspices of the Walnut Creek consortium in the Walnut Creek area of the Chino Valley Ranger District. Another example is the Forest's support in research pertaining to the function of walled hilltop sites.

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 PNF.

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 is 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)

Interdisciplinary teams of resource specialists are routinely involved in planning 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 was scheduled for revision beginning in fiscal year 2006. A Forest Planner was hired to lead the effort and initial efforts made to form a core planning team. An Extended planning team, made up of Forest resource specialists, was identified. In 2007, timelines were extended due to a Northern District Court of California Ruling that prevented use of the 2005 Planning Rule.

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 with the help of law enforcement.

In November of 2005 the Northern Arizona Land Exchange (P.L. 109-110) was passed by Congress. The primary goal of this land exchange is to consolidate both federal and non-federal lands located in the “checkerboard” portion of the PNF. An Agreement to Initiate (ATI) was signed in January of 2007. The next step is to advertise and contract for appraisal services for the land to be exchanged.

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)

There are currently 25 known weeds found within the three national forests and four additional species on lands adjacent to them. The desired condition is to prevent any new plants from becoming established on national forest lands. The control of these plants would promote ecosystem health and prevent losses in the productive capacity of the land.

The completion of the Environmental Impact Statement for the Three Forests (Kaibab, Coconino and Prescott) has been beneficial for the forest to continue managing the ever increasing invasive weed species.

The Prescott National Forest treated 300 acres of invasive plant species in 2006. We monitored 30 acres of treatment area for effectiveness and found that treatment was adequate.

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)

Adjustments were made to stocking and to grazing management that corresponded with changing conditions. Authorized numbers this year are still well below permitted numbers, and this is a response to the ongoing ten-year drought. Permit holders were either involved in inspections or were notified of findings. Listed improvements will improve livestock distribution and watershed health to maintain productivity of range lands.

In 2006, 650 acres of juniper cutting, fuel treatments and vegetative seeding were accomplished as part of the Region's Central Priority for fuel reductions. These projects reduced fuel loading and wildfire hazard potentials and secondarily improved forage production, vegetative ground cover and watershed conditions within the project areas.

Numerous range structural improvements were completed in 2006 to improve livestock distribution, benefit rangeland and watershed health. They include the following:

Table 10– 2006 Range Improvements	
Description	Allotment
Fence Construction	Muldoon
Bald Hill Cattleguard	Bald Hill
Bootleg Tank Betterment	Willow
Wilber Storage Betterment	Verde
Sand Flat Tank Betterment	Sand Flat
Burmeister Tank Fence Construction	Rice Peak

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+.

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

Recreation planning efforts seek to provide diverse recreation experiences. This diversity was accomplished by providing interpretive and accessible trails. These trails are the Lynx Recreation Trail #311 and the Lions Club Sight-Impairment Trail. A mix of multiple uses, motorized and non-motorized trail opportunities is the primary focus for the next few years.

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).

The Prescott National Forest managed 18 miles of the Verde Wild & Scenic River in cooperation with the Coconino and Tonto National Forests. This adds 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 has been only a slight reduction of maintenance backlog on trails, designated dispersed campsites and at developed sites (campgrounds, trailheads and picnic areas) due to limited funding.

The eight wilderness areas on the Prescott NF were maintained and patrolled by a seasonal wilderness ranger.

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)

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

Rangeland analysis was conducted on 2 grazing allotments and Best Management Practices were prescribed to ensure forest plan compliance.

Erosion control measures were implemented on the Hilltop campground to protect soil and water resources.

Abandoned mining reclamation affiliated with the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) occurred on Blue John and McClure mine. Further soil and water conservation measures were conducted after the initial reclamation effort to ensure protection of watershed resources.

Soil and water improvement occurred on approximately 1500 acres. This occurred through the implementation of prescribe burning, seeding, and juniper treatment.

Burned Area Emergency Response (BAER) seeding treatments occurred on approximately 200 acres affiliated with the Cornfield wildfire. This was done to help stabilize the soils and attenuate high flows.

Administrative implementation of Best Management Practices (BMPs) affiliated with mining operations, prescribed fire and fuel management, rangeland management, timber harvesting, roads, recreation use, and trails continue. Mining operation has established specific measure that will take place in streamside management zones and implemented erosion control measures. Prescribe fire operations have been completed in a mosaic pattern to maintain vegetative cover and established special burn prescriptions for streamside management zones. Rangeland management strategies have developed utilization standards and prescribe measures to maintain vegetative ground cover. Timber harvesting have identified areas suitable for mechanical operations, performed erosion control measures on disturbed areas, and established streamside management zones. Road and trail maintenance has focused on improving drainage through outsloping and rolling dips. All of these measures are done to maintain/improve watershed and riparian resources.

The draft document of the Ecological Classification of the Prescott National Forest is complete and has been submitted to the Regional Office for review. This document describes the range of variability within the Forest's Terrestrial Ecosystem Survey map units, and allows prediction of the degree of change in response to management, effects of Forest activities, wildfire, insect and disease infestations, as well as to the ongoing drought.

Abandoned mines, including CERCLA sites in the Bradshaw Mountains, continue to be water quality issues and are addressed through reclamation, mitigation, and management. These sites are the cause of some of the State's 303(d) listings. Priority sites for treatment have been identified by the Environmental Protection Agency (EPA). Reclamation is cooperative, with the EPA taking the lead on private lands. Mine reclamation projects and their status include the following:

- Blue John reclamation is complete.
- McCleure mine was reclaimed using biosolids, seeding, and erosion control methods including wattles and erosion matting. The reclamation included removing toxic material from the stream channel. The site is being monitored for treatment effectiveness.
- Reclamation design for Golden Turkey mine on Turkey Creek was completed.

As discussed in previous sections, the Forest obtained grant funding through the Arizona Water Protection Fund program to reconstruct floodplains and restore riparian areas along Lower Lynx Creek.

Project analysis, such as that for the Gold Basin mining project; include analysis of potential effects on riparian area in terms of both decreased groundwater availability and ground surface disturbance.

Best Management Practices designed to protect riparian vegetation and floodplains are implemented on projects.

Timber

"Provide for non-declining 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. From 1992 until 2000 treatments were sporadic with the only large-scale treatments being the Maverick, Schoolhouse, Dearing and Goldwater Timber Sales. Since 2000 the Forest has been selling all the Timber Sales it has offered. 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 2006, the timber program continued to move toward a more normal green tree harvest program. The objectives of the green tree harvest program are 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." Only a small percentage (0.5%) of the 454,598 acres of juniper/pinyon-juniper in MA 2 (woodland) has been treated since 1986. A generous estimate of 15 cords/acre translates to 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.

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 2006, impacts to wildlife habitat management from forest health projects continued to be influenced by the recent bark beetle outbreak that had killed extensive acreage of ponderosa pine. The lack of precipitation also killed many pinyon pines and junipers, and had curtailed growth in the grasslands and chaparral.

Wildlife populations are expected to shift accordingly to reflect these changed habitat conditions; wildlife species composition will shift toward those species that favor open forests and younger seral stages. 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. The open areas provide a greater diversity of understory vegetation and habitat for small mammals, birds, reptiles and insects. By improving the plant species diversity in the understory, the increased habitat diversity provides a greater abundance of prey species for larger predators from flycatchers to bats to owls to bobcats. Pockets of dense forest will remain in protected canyons and on north-facing slopes. These areas provide habitat for those species needing older or late seral stage habitats.

Wildlife habitat considerations are incorporated into the design and implementation of many projects including fuels reduction, forest health, livestock grazing, road use permits, and small tracts acts.

Progress toward improving habitat for threatened and endangered fish species is uncertain. Habitat for threatened spinedace 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, a lack of flood disturbance events from 1995 to 2004 has resulted in aquatic habitats becoming narrower and deeper as riparian vegetation has increased and stabilized stream banks. Recent flooding in the fall of 2004 and winter of 2005 restructured the aquatic habitat and provided spawning conditions that resulted in high reproduction and recruitment of native fish species into the community. However, monitoring data indicate that spinedace 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 2006 is slightly higher than 2005. Criteria used to determine which projects will be monitored include the density of sites in or near a project area, the magnitude of the project, the likelihood of vandalism, 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 in the past, chiefly due to a lack of communication or the failure of a site to be identified. In some cases, site protective markers have been removed by the public, not realizing their purpose. In 2006 this seems to have been less of a problem, however. The problem stems from population increases, where more homes are built along the "interface" between 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 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, and 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. Monitoring is recognized on the Forest as an important, even vital, activity, though this reality is not reflected in current funding mechanisms, staffing, or priority work plans.

Noxious Weeds

Budget constraints and a lack of personnel have prevented extensive monitoring of the noxious weeds.

Range Management

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

Recreation

The establishment of the National Visitor Use Monitoring (NVUM) program as a national standard has and continues to provide consistent data for day use developed areas, overnight use developed areas, wilderness, general forest area use and view corridors. As each forest cycles through more NVUM surveys, the quality and accuracy of the data improves.

As the population of the general area grows, recreation demands increase. Budget constraints limit the number of law enforcement officers available for enforcing compliance with regulations such as the restriction of Off Road Vehicles to designated trails and roads.

Soil and Water

Budget constrains and a lack of personnel have limited 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 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.

Section 4 – Emerging Issues

Fire Management

A combination of circumstances has made the public very aware of fire management actions and practices on lands managed by federal and state agencies across the nation. This level of awareness has been extremely prevalent in all communities within and adjacent to the Prescott National Forest. These circumstances include:

- an increase in vegetation and forest fuel loadings since the disruption of wildfire in its natural role in fire-adapted ecosystems;
- effects of a long-term drought;
- an increase in the number of homes and human access (wildland urban interface) in and adjacent to National Forest lands;
- and recent, high-profile catastrophic wildfire events in Arizona and across the nation where lives and homes have been threatened and lost (example the Indian Fire in Prescott in 2002).

The threat of catastrophic wildfires has substantially increased public awareness of fire management practices and actions with an expectation that efforts will be made to protect lives and homes. This increased interest has provided many opportunities to work with individuals, groups, and other agencies to reduce these threats, but it has also created many challenges. These challenges include:

- increased treatment opportunities and needs with a limited budget,
- varying levels of expectations by the public with some wanting aggressive treatments adjacent to their neighborhoods and others wanting little or no treatment,
- and reduced numbers and types of resources that are available for wildfire suppression and fuels management actions.

Smoke generated by prescribed fires has become one of the most challenging issues. Smoke emissions from all prescribed burns during 2006 were approved and monitored by the Arizona Department of Environmental Quality (ADEQ) and were well within acceptable legal limitations. However, the Prescott area sits in a basin that attracts and holds smoke, sometimes for days following completion of a prescribed fire. Even at low concentrations, smoke can reduce visual qualities and cause breathing difficulties, particularly to people with breathing disorders such as emphysema, asthma, or allergies, and even to others who are hyper-sensitive to smoke. Smoke in the air or even notification through the media that prescribed burning is planned generates numerous phone calls to local Forest Service offices. Keeping the public informed is an enormous part of the preparation process for every prescribed burn and every day of implementation due to smoke issues. Modifications were made to prescribed burns in 2006 to reduce smoke intensities and the length of time that smoke was present. These modifications included size and locations of burns, and timing and days of continuous burning in any single airshed, however, smoke issues did and will continue to persist.

Retention of the work force continues to be a challenge. Pay scales for entry-level positions in the fire management organization are lower than many job fields in the Prescott area. Trained firefighters are highly sought after by numerous employers in state, county, and local agencies, and the private sector.

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. 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, user-created trails (also called social trails) around the Forest and, in some cases, altered existing trails. When new social trails are created or when existing trails are altered, heritage resources are in danger of being affected by direct impacts. Therefore, the more restrictive the 2007 PNF travel management decision related to motorized access to dispersed camp areas is in some forest locations, the more potential there could be for increased protection of archeological resources.

As the population of Yavapai County increases and the public use of the Forest correspondingly increases, and 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 the density of overstocked ponderosa pine stands. There is an urgent need to treat these stands to prevent another extensive insect attack, improve the health in ponderosa pine, and to reduce the potential for crown fires. The increased timber industry infrastructure has allowed industry to purchase, remove, and utilize the wood we have offered. It is critical that this trend continue. The ongoing drought or dry period situation in the Southwest continues and increases the potential for another, Ips beetle epidemic and associated pine mortality.

Noxious Weeds

Weeds have expanded to 187,500 acres or 3 percent of the land area over the three forests, representing a dramatic increase over the last 20 years. Riparian corridors, especially the Verde River, have noted increases in tamarisk, Russian olive, and tree of Heaven, as well as some of the knapweeds. Containing these species would avoid a decline in riparian values.

Range

Drought continues to affect resource conditions on the forest and will into the foreseeable future. Adaptive management, effective communication, and timely actions between the agency and producers will be critical in managing this issue and its impacts on future range conditions and stocking capacity.

Recreation

Population increases in Yavapai County are continuing to create additional pressures for diverse recreation use. There is a need in the north Williamson Valley area for more developed recreation opportunities in the Walnut Creek/Camp Wood area. Similarly, rapid population growth in the Paulden, Chino Valley and Verde Valley communities is impacting the Verde River ecosystem through increasing dispersed recreation activities in these areas, including camping, picnicking, and off-highway vehicle use.

As the population in Yavapai and adjacent counties increases, the number of visits to the eight Forest wilderness areas is expected to increase as well. Impacts to natural resources within wilderness are documented, monitored and maintained. Wilderness education has been recognized as a way to help prevent negative impacts to wilderness. A Wilderness Education plan is established to address this need. Impacts and invasive weeds in wilderness are documented.

Travel Management continues to be a major focus in recreation. The Prescott National Forest already complies with the National Travel Management direction as “closed to cross country travel”. The Forest continues to sign and map the open roads and motorized trails with the intention of providing the public with a required Travel Management map that will fully implement the National Travel Management program.

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

The extended ten-year drought continues to be a major issue. Some climatologists believe that the current cycle we are experiencing is not a drought, but rather a return to more normal precipitation amounts, after a wetter than normal cycle of over 100 years. Only the period between the mid-1970s and 1995 experienced above-normal precipitation.

Water availability and use is perceived as an emerging issue for the Forest. The Colorado River adjudications were made during the wetter cycle, when stream flows were 150% of normal. Current precipitation cycles are alarming and may not provide enough water to support regional lifestyles and the needs of the rapidly increasing population of Yavapai County and the State of Arizona. The proposed exchange of Yavapai Ranch lands and the City of Prescott’s purchase of ranch lands within the Upper Chino aquifer for the right to pump groundwater have increased scrutiny of the potential effects of consolidation and development on the springs that feed the Verde River.

These increased concerns with groundwater and stream flow may put pressure on public lands to look for ways to increase water production and in-stream storage. Salt River Project personnel have long thought that in-stream storage within the Verde River basin was inadequate. Actions to increase storage have been tabled since the 1980s. The Forest Plan had a goal of increasing water production in chaparral, and studies were conducted in the Battle Flat research area, as well as other areas on the Forest. The results suggested that though it might be possible to obtain small increases in water yield, the costs would be high.

Timber

The most critical resource issue facing the Forest is the density of overstocked ponderosa pine stands. There is an urgent need to treat these stands to prevent another extensive insect attack, improve the health in ponderosa pine, and to reduce the potential for crown fires. The increased timber industry infrastructure has allowed industry to purchase, remove, and utilize the wood we have offered. It is critical that this trend continue.

Cultivating public awareness and acceptance of the need to use timber sales as a way to treat hazardous fuels and improve forest health in the wildland/urban interface continues to be an ongoing challenge since the complexion of the community changes constantly. The wildland/urban interface is an increasingly important venue and audience for natural resource interpretation and public information/interpretation efforts will continue a focus in this arena.

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 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. Habitats on the Forest are becoming more important as threats continue to increase across their range. 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 impact 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

While the Prescott National Forest started making personnel and program changes needed to begin Forest Plan Revision analysis in 2006, it will be three or more years before the process is completed. Therefore, there is a need to complete a Forest Plan amendment, now, to allow Wildland Fire Use in areas other than Wilderness. This process for analyzing a Wildland fire's severity, path and potential social and ecological risks before determining how quickly and what methods should be used to manage it, needs to be allowed as an accepted tool to restore fire adapted ecosystems in portions of the Forest, in addition to Wilderness.

As Forest Plan Revision processes proceed, consideration should be given to revising the plan to provide for the following:

- ◆ Enhance the Forest's ability to restore fire as a disturbance process in fire adapted ecosystems.
- ◆ Recognize the Wildland Urban Interface and the need for fuel reduction within those areas.
- ◆ Focus use of commercial timber sales as a tool to accomplish restoration of ecosystem health, fuel reduction, and habitat improvements.
- ◆ Assess land acquisition priorities to respond to potential for blocking access to the forest due to increased development on private lands surrounding the forest.
- ◆ Describe desired ecological conditions related to range; identify and carry out monitoring procedures that display progress toward those conditions.

Section 6 – Certification of Forest Plan Sufficiency

I have reviewed this annual Forest Plan Monitoring and Evaluation Report for Fiscal Year 2006 and determined that:

- ◆ While management activities on the Forest continue to lead toward desired conditions, the ongoing drought compounded with the ponderosa pine, Juniper, and Pinyon Pine insect infestations 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 fuel wood 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/Alan Quan

Alan Quan, Forest Supervisor

September 18, 2007

Date