United States Department of Agriculture

Forest Service

Southwestern Region

2003 Forest Plan Monitoring and Evaluation Report

Prescott National Forest

Copper Canyon, Verde Ranger District

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Section 1 – Resource Monitoring Summary for 2002

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 the 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," "Plan") 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 2003 (October 2002 through September, 2003) 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.95). 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 for 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 output; 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. This report covers the time period from October 1, 2002 through September 30, 2003.

Fire Management

Once again, winter/spring moisture was below normal. The dry conditions and associated mortality to vegetation escalated concerns about catastrophic fire in the wildland-urban interface. With the below normal precipitation and record high temperatures, the Forest initiated Fire Restrictions in mid-May. However, even with the continued dry conditions, the Forest did not implement a full Forest closure. The Forest did implement a closure in the Horsethief Recreation Area due to the ponderosa pine mortality caused by the Ips beetle epidemic.

The Forest had 70 wildfires, 28 caused by lightning and 42 by humans. The Forest also experienced a 993-acre fire that occurred from an escape during the Cherry prescribed burn during the month of June. The fire escaped along the north perimeter of the burn unit and was suppressed the next day without burning any private land in-holdings. Even with the below average summer and fall precipitation, fire activity remained low the remainder of the year. However, fire activity was heavy elsewhere once again in the Southwest and other regions. Forest crews and individuals spent several weeks on other units working on noteworthy fires such as the Aspen fire by Tucson, AZ and the Southern California fires in the San Diego area.

The Forest continued to monitor the cumulative annual treatment of vegetation by prescribed fire in order to evaluate trends in vegetation change. The purpose is to keep prescriptions in concert with changes in vegetation conditions due to prescribed fire and naturally caused fire burning under prescription, and to update prescriptions as needed. Very dry conditions throughout most of the year prohibited extensive use

of prescribed fire. Mechanical treatment of 1371 acres in the chaparral fuel type was completed in the Kingswood/Hassayampa, even though the project had to be delayed due to the dry conditions. The Cherry prescribed burn (7000 acres) was considered a success even though an additional 993 acres burned as an escape the day after the prescribed burn. The treatment has provided the community of Cherry with defensible space along its southern and eastern town perimeter. Adjacent to private property and along roads in the Forest, 513 acres of bug killed trees were removed with fuels treatment funds. However, a non-existent summer rainy season, extensive insect attacks and lack of personnel made the implementation of prescribed fire difficult in September.

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
TOTAL	38,544	68,330	6,472	2,008

The use of the fire budget analysis (NFMAS) process helped determine fire management efficiency for wildfire management by giving us direction and funding to staff up to 95% of our Most Efficient Level (MEL).

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 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.

There were 78 heritage resource projects completed in fiscal year 2003 in the Forest, resulting in the discovery of 131 archaeological properties. Of those projects, 39 (50%) resulted in direction to manage for the presence of historic and prehistoric resources. 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.

Monitoring also consisted of checking 125 non project-related sites for signs for vandalism and natural deterioration. These sites are located throughout the Forest and consisted of both

prehistoric and historic sites. Prework was also completed for an archaeological test for two archaeological sites in the proposed Gray Wolf Land Exchange area; the testing will be carried out in FY 2004. The purpose of the test is to determine if these sites are eligible for the National Register of Historic Places.

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 2003, mortality from Ips bark beetle decreased significantly from the previous year. The decreased mortality was due to better moisture consisting of March snows and better summer rains. In addition to the better moisture in 2003, a lot of the poorer pine sites (side hills with shallow soils, ridge tops with shallow soils, and brush areas where pine had encroached) had been hit hard in 2002, sparing the better pine sites with deeper soils and areas that had been treated with commercial thinnings. Even though the Ips bark beetle population was high again this year, the increased moisture and better sites (of which many had been thinned) have kept the mortality well below the 2002 level. Western pine beetle mortality remained steady, with only individual trees affected. Mistletoe continues to be a problem in some pine stands. The level of mortality in pinyon pines in 2003 was also reduced due to the increased moisture.

Lands

No rights-of-way were acquired in 2003.

Noxious Weeds

Fifty-seven acres of invasive plant species were treated in 2003. The largest area was 30 acres of sweet resin bush near Cottonwood that were initially mowed in 2002 and was followed by herbicide application this year. Followup 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 weeds populations.

Preparation of an Environmental Impact Statement for the Three Forest (Kaibab, Coconino and Prescott) Noxious Weed analysis is ongoing. The Forest has the lead for the invasive plant species analysis for the Verde Wild and Scenic River Environmental Analysis.

Protection

The Forest currently has two full-time Law Enforcement Officers (LEO's) and a Patrol Captain who also supervises the Kaibab National Forest law enforcement activities. This is a decline in Officers from 3 full time LEO's and a Supervisory LEO assigned to the forest in 1990. 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 flat budgets.

There has been a steady increase in the amount of violent crimes committed on National Forest lands. In 2003, LEO's made 14 arrests for resource related violations and assisted other agencies in an additional 18 arrests. This is an increase from just 4 resource-related arrests performed in 2002.

During 2003, the LEO's worked a total of 7553 hours and made approximately 2470 contacts with the public. This is a decline of approximately 450 hours from 2002 but an increase in contacts of about 300. The decline in hours can be attributed to a slightly less severe fire season and a vacancy in the Patrol Captain position for about 3 months. The hours worked for 2004 are expected to exceed 8100, a fairly significant increase.

In 2003, there were 26 certified Field Protection Officers (FPO) on the Prescott Forest, of which 18 recorded incidents in the LEIMARS data base. Of all the certified FPO's, 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 stagnate for the last several years and the number of Deputies assigned to patrol the forest areas remains at 3. Demands on these Officers continues to rise as they respond to an increasing number of search and rescues, visitor assists, and crimes against persons in the National Forest.

Problems by Resource Area:

1) Protection of cultural resources: The Forest recorded 3 incidents involving minor removal or disturbance and 1 incident of major disturbance of cultural sites. There were no suspects identified or prosecuted in any of the 4 incidents reported.

2) Fuelwood theft: There were 49 reported violations for 2003 involving timber damage or theft. In 6 cases the violator was identified and warned, 5 in which the violator was issued a citation and 38 cases where the damage or theft was discovered but unable to identify the violator.

3) Fire violations: There were a total of 320 fire violations for the year. In most instances, these involved either having a fire during restrictions or outside of 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, is the largest category of violations experienced by the Forest; 427 incidents were reported in 2003. Many of the occupancy violations are from persons exceeding the established stay limits in the designated dispersed campsites and homeless persons attempting to live on the National Forest. Littering and dumping is prevalent throughout the area and is committed by all classes of visitors.

5) ORV damage: There were a total of 51 violations reported for driving off-road or causing unreasonable damage off-road during 2003. This is up from 34 violations for the previous year. The trend is continuing upward in OHV use and damage caused by them.

Range Management

Drought once again dictated the program of work for Range Management. Forty-eight allotments (1,074,195 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 Action Section 7 consultation agreements. Adjustments

were made to stocking and to grazing management that corresponded with changing conditions. Permittees were either involved in inspections or were notified of findings.

Approximately 30 range improvements were constructed this year, including the fencing of 2.5 miles of Sycamore Creek (Santa Maria watershed) and several springs. Additional projects included new fencing and a variety of water projects (trick tank repair, pipelines and troughs). No treatments to increase forage production (brush treatments, reseeding, etc.) were conducted this year.

Additional stocking was authorized this year when summer rainfall improved resource conditions over 2002. Approximately 5,225 cattle were authorized to graze at some time during 2003. This is 31% of the 16,644 cattle permitted on the PNF and a 22% increase from the 3,650 animals on the Forest at the end of 2002. Twenty two allotments had no stocking (30 in 2002). 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 and if findings show a decline then action is required before trend declines, this is tracked through short term monitoring.

No grazing NEPA decisions were made, although the Chino Grazing Project analysis was largely completed by the end of the fiscal year. Other NEPA analyses were suspended to focus personnel on permit administration. NEPA analysis on the Verde Wild and Scenic River project continued; this analysis included 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

Use of developed recreation facilities on the Prescott National Forest has been relatively steady for the past several years. Most fluctuations in outdoor recreation use and tourism levels result from macroeconomic trends such as changes in gasoline prices. However, on the Prescott National Forest, during 2003, continued widespread tree mortality due to drought and pine beetle infestation, with resulting forest restriction due to hazardous fire conditions, severely affected developed recreation usage. Widespread timber salvage and hazard tree removal in campgrounds and day-use sites also contributed to reduced recreation usage during the 2003 recreation season. In 2003, there were 150,131 visits to developed sites based on extrapolation from paid fee envelopes (44,231 overnight camp visits, including group sites, and 105,900 day-use visits). This equates to approximately 250,000 Recreation Visitor Days (RVDs), significantly below the current Forest Plan level of 380,000 RVDs and the previous year's279,188 RVDs. Developed recreation use continues to be concentrated on weekends during the late spring, summer and early fall. Weekend occupancy percentages during the peak season range between 80 to 100 %. The following list shows average occupancy in selected campgrounds for the entire open season (7 months):

- Groom Creek Horse Camp: 11.5 %
- Hilltop Campground: 21%
- Yavapai Campground: 36%
- Lower Wolf Creek Campground: 12%
- Lynx Lake Campground: 33%

Forest-wide specific dispersed site monitoring occurred in 2003 by the use of fire prevention and forest protection officer patrols. Actual use figures for Alto Pit and Hayfield developed Off-Highway Vehicle (OHV) Areas totaled about 4500 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 3. There may have been a drop in visitation in the OHV areas due to Forest restrictions and area construction in 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 including OHV use (5th in the Region) and 31,708 visits primarily for OHV use (3rd 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 done for dispersed recreation. In 2001, the Forest 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. Dispersed camping within the Prescott Basin, was only permitted in designated sites starting in 2001. A volunteer group, formed in FY 2002, 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 patrols helped monitor these sites, concentrating on fire prevention, camping limits, and education.

Enforcement of the new camping policy included documenting actual use at the sites. The designated dispersed campsites were at capacity only during the Memorial Day weekends. There was some drop in dispersed site use due to Forest fire restrictions placed on the use of campfires in the dispersed sites. The two main site use impacts appeared to be soil compaction, expansion of the sites, and some loss of understory vegetation immediately around each site. There also seems to be a decrease in the number of people illegally camping in non-designated campsites within the Prescott Basin.

In addition, there are 166 concentrated use areas in general forest areas on the Prescott National Forest. The Prescott Basin use described above only accounts for dispersed camping in about seven of these concentrated use areas.

The table below displays the approximate number of visitors to six of the Forest's eight wildernesses during 2003. 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 2, annual visitation to the six Wilderness areas is probably 15,374 visits. The NVUM survey 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 700 visits.

Table 2: 2003 Wilderness Visitation Estimates

Granite Mountain	3,172
Pine Mountain	341
Sycamore Canyon	376
Juniper Mesa	173
Castle Creek	780
Woodchute	3,413
TOTAL	8,955

Due to limited funding, no trails in wilderness were constructed or reconstructed. Trails maintained during 2003 include 23 miles outside wilderness. Trail maintenance occurred in the following five wildernesses for a total of 50 miles. The major work done is as follows:

- Castle Creek: Trails 240, 234, 239, 236, 201
- Cedar Bench: Trails 164, 506,162, 163, 27
- Granite Mt.: Trails 261, 308
- Juniper Mesa: Trails 3, 91, 24, 100
- Pine Mt. Trail

Roads

During fiscal year 2003, nine miles of existing Forest roads were reconstructed to improve access and improve watershed condition. About 14% (259 miles of the existing 1,886 miles) of system roads were maintained to the desired maintenance standard. Seven miles of roads were decommissioned.

Soil and Water Resources

Three projects were implemented this year to improve soil and water conditions. Approximately 1,440 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 rehabilitate the failed gabion structure in Lynx Creek and 12,500 yards of sediment were removed from the site (this project will be completed in 2004). 10% road funds were used to bring the Bear Siding road up to maintenance level 3 to reduce sediment going into the Verde River. In addition, best management practices (BMPs) were applied during fuels reduction treatments, harvest of bug-killed trees, roads 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) were done for roads in the Turkey/Humbug 5th code watersheds (now named Black Canyon Creek and Agua Fria River - Upper Lake Pleasant with the new National Resource Conservation Service mapping) and for the Verde Wild and Scenic River analysis area. Findings are used 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 continue, although the drought is affecting the readings. The drought has reduced flows and in some areas has dried flows entirely, but enough data has been collected that applications for three instream flow reservations will be made in FY 2004 using data collected in 2002 and 2003. Additional filings will be made in the future using the data collected.

Stream channel profiles and vegetative transects were installed at six sites in Ash Creek (headwaters on Mingus Mountain). These monitoring points are being used to measure changes in profile and vegetation following the Cherry fuels treatment prescribed burn and escaped fire.

The Forest participated in the Verde Watershed Association and Upper Agua Fria Watershed Partnership. The Forest was a sponsor of the Drought Symposium at Northern Arizona University which had over 200 attendees. Employees were again instructors at the Master Watershed Stewards Program put on by the Arizona Agricultural Extension Service.

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 Resources

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 5927 CCF of saw timber consisting of small sales of Ips bark beetle mortality on 404 acres, and 3931 cords (3105 CCF) 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 2003, the entire sawtimber program consisted of sanitation cuts on 404 acres where trees killed by the Ips bark beetle were cut. No reforestation activities were undertaken in 2003. Acres of harvest treatment by type of harvest, 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
TOTAL	**592**	**4,853**

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
TOTAL	**32**	**213**	**3,108**

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 Towers site, while two young were fledged at the Ladders site. Breeding attempts at Lynx Lake were unsuccessful this year.

Mexican Spotted Owl

During 2003, the Prescott National Forest conducted informal occupancy and reproduction monitoring to standard in all 15 established Protected Activity Centers ("PACs"). Nine of the PACs were occupied; six pairs and seven single owls were found. No fledged offspring were observed.

Overstory conifer mortality from beetles and drought continued to alter Mexican Spotted Owl habitat in PACs.

Northern Goshawk

All eight of the Post Fledging Areas (PFAs) were monitored to standard. All were unoccupied. The trend appears to be continuing downward. Overstory conifer mortality in PFAs due to drought and beetles appears to be minimal.

Peregrine Falcon

Thumb Butte was monitored for peregrine falcon breeding activity. One young was fledged. The Granite Mountain eyrie was not monitored, 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, seven permanent sites on the upper Verde River were monitored in the spring and fall of 2003 for occurrence of spikedace and information on habitat conditions. Spikedace continued to be absent in fish surveys at all seven sites 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 continued in 2003 due to beetle kill and drought. These changes will have long-term effects to Tassel-eared squirrel (Abert) (down), goshawk (down), p. 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:

- $11,001,000
- $15,152,000 (37.73% increase)
- $14,426,000 (4.79% decrease)
- $13,160,000 (8.78% decrease)

From 2000 through 2003, the Forest had a net 20% increase in funding, in 2000 dollars. Considering inflation, the Forest's budget is flat, compared to 2000.

Section 2 – Progress Toward Desired Conditions

Fire

"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. 13)

FY03 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. The Forest has not pursued this method in recent years due to the shift in timber stand management strategies.

The Forest is making progress in returning fire to its natural role in various ecosystems, even with the added complexity of implementing this strategy at a larger scale. Use of prescribed fire is expected to continue to increase, leading to 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 is 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 not able to spend much time working on research, educational, and enhancement activities.

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 (1) to remove dead and dying trees to reduce the spread of the beetle, and (2) to thin stands to promote healthier and more insect-resistant trees. The small markets for timber products from the Forest limit the Forest's ability to accomplish commercial thinning projects designed to create a more fire- and disease-resistant forest (it is difficult to get bidders for commercial sales).

Lands

"Conduct landownership adjustment, right-of-way acquisition, landline location and special-uses programs to promote efficient management." (Forest Plan, p. 13)

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).

Noxious Weeds

"Control noxious weeds on rangelands to prevent significant population buildups." (Forest Plan, p. 45)

The systematic approach to inventory and management of invasive plant species described in the ongoing three-Forest Noxious Weed Environmental Impact Statement 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. 11)

As the drought continues, the Forest has accelerated monitoring and is making stocking adjustments to ensure that adverse impacts from livestock grazing do not exacerbate drought effects. 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 very 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 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 NVUM Survey 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 ATV's and dirt bikes.

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 Tr. 311 during FY2003 season, and lasted into part of FY 2004. Considerable progress has been made in providing interpretation of the Prescott 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. Diverse camping opportunities exist throughout the Prescott 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/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.

Roads

"Maintain a transportation system to support resource goals." (Forest Plan, p. 13)

The Prescott National Forest is progressing to the desired road conditions by decommissioning roads, maintaining roads, adding newly discovered roads to the "unclassified" lists and maps for management decisions, and reconstructing roads to the objective maintenance level prescribed by management.

Soil and Water

"Protect and improve the soil resource. Provide for long-term water flow needs through improved management and 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)

As noted in Range, 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 nearly complete at the end of FY 2003. 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. Priorities 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 1,800 acres were treated in 2003. Slash from cut junipers provides organic matter and microhabitat for the establishment of herbaceous ground cover.

"Riparian dependant resources have preference over other resources. Improve all riparian areas and maintain in satisfactory condition." (Forest Plan, p. 13)

In fiscal year 2003, the Forest continued fencing riparian area,s with the largest project being the exclusion of grazing from a 2.5 mile section of Sycamore Creek (Santa Maria watershed). This project was partially funded by the Prescott Chapter, Audubon Society.

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. Improve stand productivity through management. Provide green and dead fuel wood 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. 12-1)

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 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 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 through 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 (MAs 2 and 3, respectively). Through fiscal year 2002, approximately 18% of the commercial timberland was treated. In 2003, the timber program focused on salvaging dead and dying beetle-killed trees.

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 decreased desireability of smaller trees in more remote locations offered for sale. It was also originally envisioned that the Chino 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 FY03, the emphasis in firewood products shifted to the Chino 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 sales made up of non-traditionally sized (smaller) 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 the management goals and objectives in Arizona Cold Water Fisheries Strategic Plan. Maintain and/or improve habitat for threatened or endangered species and work toward the eventual recovery and de-listing 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. 12-1)

In 2003, 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 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 slopes.

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

Progress toward improving habitat for threatened and endangered fish species is uncertain. Habitat for threatened spikedace and other native fish in the 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, deeper and reduced in size because of encroaching riparian vegetation and stabilizing streambanks. Monitoring data indicate spikedace in the 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 2003 is typical of the level of the monitoring that 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 at 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 marking 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.

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 pro-active 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

An aggressive public information/education program is being implemented as the three-Forest Noxious Weeds EIS is being prepared. 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.

Wildlife

As in previous years, it is evident that items monitored 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). 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, Forest Plan revision, and 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 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

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 in another section is 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 be able 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 or 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 ponderosa pine stands to prevent another extensive insect attack. There is an urgent need to treat these stands to improve the health of the pine stands and to reduce the potential for crown fires in these stands. Limits to treating many of these stands include the lack of timber industry infrastructure needed to purchase, remove and utilize the wood. 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 because of human presence. Other disturbed areas (including 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 during drought is a balancing act between sustaining resource conditions and allowing stocking of grazing allotments. Effects of the drought on forage plants are estimated by monitoring, but the duration of the current dry conditions may have impacts that are not entirely understood. In addition, the determination of when conditions are suitable for restocking has been complicated by fluctuations in precipitation. Forest range managers are forced to make short-term management decisions. The unprecedented (in recent times) conditions affect the grazing permittees' decisions on livestock ownership and financial planning as well as investment in projects on Forest lands.

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.

An Environmental Impact Statement is being completed to analyze the impacts of cross-country travel by off-highway vehicles on five Arizona Forests, including the Prescott.

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, 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 were that increases, although small, were possible, but costs were high. As demands for water increase, there could be demands placed on the Forest to revisit the feasibility of increasing water production.

Timber

The most critical resource issue facing the Forest is the need to treat dense overstocked ponderosa pine stands to prevent another extensive insect attack and decrease the potential for crown fires. Limited local timber industry infrastructure limits contractors' ability to purchase, remove and utilize the wood. Until such infrastructure is increased, the Forest will continue to have difficulty selling timber sales and will have to rely on Forest funding to accomplish forest health goals.

The ongoing drought situation in the Southwest will enhance and continue the potential for another Ips beetle epidemic and associated pine mortality and wildfire potential.

Wildlife

There is continuing debate and research on the restoration of the 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. 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. Furthermore, if there were to be widespread abandonment or substantial alteration of ranching on allotments, there would be a cumulative effect on wildlife. In addition, increased population and urbanization around the Forest has led to increasing public pressure (e.g., recreation) on threatened and endangered habitats, especially in and along the Verde River.

Other emerging wildlife issues:

- Changes in Forest habitats due to bug kill.
- Noxious weeds are expanding and could eventually impact wildlife habitat.
- Housing developments and new roads are fragmenting grassland habitat and pushing pronghorn into lower quality habitat on National Forest land. Herds may lose resilience as they become isolated.
- 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

- Cooperate with local communities in their development of Community Protection Plans. Continue planning fuel reduction/forest health projects to promote wildland/ urban interface safety and to reduce the risk of insect and disease outbreaks.
- Emphasize the use of the ecological database in any analysis or planning that considers changes in vegetation or affects vegetation, soils, or watershed conditions.

Section 6 – Certification of Forest Plan Sufficiency

I have reviewed this annual Forest Plan Monitoring and Evaluation Report for Fiscal Year 2003 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 urgent action.
- The report is responsive to monitoring information as identified in Chapter 5 of the 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, fuelwood management and Forest Plan monitoring is currently underway on the Forest. Forest Plan revision will begin in fiscal year 2006.

Therefore, I have determined that the 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 9/20/04

Michael R. King, Forest Supervisor Date