

Coconino National Forest

Plan Monitoring Report

For

Fiscal Years 2004 and 2005

This monitoring report is structured following the format of the Monitoring Plan located in Table 14, Chapter 5, of the Coconino National Forest Plan.

Recreation

Wilderness

Wildlife

Range

Timber

Watershed

Minerals

Special Uses

Roads

Protection

General Administration

Trends

Items Monitored	Intent	Monitoring Method Unit of Measure	Frequency	FY 2004	FY 2005
Developed Site Use	Determine recreation use and demand	Recreation Information Management (RIM) system use reports/RVD's We no longer use RIM, we now use NVUM from 2000 and 2005	Annually	Did not collect info per site but trend is up per 2000 NVUM	FY 2005 NVUM is not yet published, but informal surveys indicate use is increasing. Because of the winter we had a big increase in snow play activities.
Developed Site Condition	Prevent damage and deterioration Meet health and safety requirements	RIM system facility condition reports, project reviews/Facilities by RIM maintenance class We no longer use RIM, we now survey site condition and record in INFRA	Annually	Ongoing upgrade of Rec sites has decreased damage and deterioration for many Forest rec sites.	Trend has been some site deterioration as noted in rising Deferred Maintenance costs. Budgeting issues have increased the amount of deferred maintenance needs on the forest.

Items Monitored	Intent	Monitoring Method Unit of Measure	Frequency	FY 2004	FY 2005
Implementation of ROS Guidelines	Ensure the protection of existing ROS classes	Review project work plans involving vegetative treatment, road/trail construction, or major development/Acres by ROS class	Annually Routine consideration of settings has generally maintained status quo of setting acres.	Increased state population is eroding more primitive settings while road system deterioration has caused more primitive roads	Increased state population is eroding more primitive settings while road system deterioration has caused more primitive roads
Off-Road Driving Compliance and Damage	Prevent unacceptable damage to resources and meet provisions of Forest Off-road Driving implementation plan	Area and project reviews, RIM system Area condition We no longer use RIM.	Annually	We have intensively surveyed some areas and are finding user created route proliferation up to 1.5 mile per square mile in some areas	Observation indicates increased resource damage from unregulated ORV use in some areas. Forest off road driving plan will be replaced by Travel Management Rule starting in FY 06.
Dispersed Area Use and Experience Levels	Determine recreation use and demand	RIM system/ RVD's We no longer use RIM	Annually	Demand for dispersed recreation has increased generally as our population has increased – this is based on field observations.	2005 NVUM will give a more accurate assessment of dispersed use. Results expected soon.

Items Monitored	Intent	Monitoring Method Unit of Measure	Frequency	FY 2004	FY 2005
Dispersed Area Condition	Prevent unacceptable resource damage	RIM system, Code-a-Site inventories, project reviews/Area condition We no longer use RIM	Annually	We are seeing increased resource damage as population increases	Same as 04
Cultural Resource Compliance Project	Meet Federal regulation; ensure project compliance with guidelines	Approved cultural resource clearance for each ground-disturbing activity/	Annually	137	22
Cultural Resource Property Protection	Protect significant properties	Patrol areas in conjunction with other duties/ Site condition	Annually	Making patrols, working with volunteer groups and law enforcement personell. The results have been increased damage to cultural sites as a result of increased visitation but we have also been providing more protection to key sites and we have taken legal actions on several criminal cases.	Same as 04

Items Monitored	Intent	Monitoring Method Unit of Measure	Frequency	FY 2004	FY 2005
Trail Condition	Determine effectiveness of Forest Trails Program	RIM system, project reviews, trail condition surveys/Miles We no longer use RIM but are now using TRACS	Sample 20% Annually –	Trails are generally in good shape considering lack of OM funds. Volunteers have helped maintain trail condition	Trails are generally in good shape considering lack of OM funds. Volunteers have helped maintain trail condition.
Visual Quality Objective (VQO) Compliance	Ensure Forest standards and guidelines for visual management are met	Review project work plans and conduct project reviews - involving vegetative treatment, road/trail construction, or major development/Acres by VQO	Annually Compliance is ongoing through VMS application for all projects on the Forest. VQO acres are hard to quantify and are not an accurate measure of VQO compliance	Forest VQO standards and guidelines are routinely met or mitigated through routine review of projects for VQO compliance	Forest VQO standards and guidelines are routinely met or mitigated through routine review of projects for VQO compliance

Items Monitored	Intent	Monitoring Method Unit of Measure	Frequency	FY 2004	FY 2005
Wilderness Use	Determine wilderness use and demand	RIM system/ RVD's no longer use RIM, now use NVUM for use trends	Annually	Trend is; increasing use as local and regional population grows From 2000 NVUM	Trend is; increasing use as local and regional population grows per NVUM (awaiting 2005 report)
Wilderness Condition	Minimize resource damage and changes of WOS classes, particularly primitive end	RIM system, Code-a-Site inventories, project reviews/ Area condition no longer use RIM, now use Professional observation and in areas where there are more serious problems we are doing some limits of acceptable change monitoring (LAC).	Annually	There are increasing impacts to the wilderness resource as use increases and over all use is increasing.	Large population increases in region have resulted in decrease in wilderness setting attributes. Use and resource impacts to wilderness resources are increasing. Some wilderness areas are now being used for illegal marijuana gardens - associated impacts of clearing areas and adding irrigation systems are increasing.

Items Monitored	Intent	Monitoring Method Unit of Measure	Frequency	FY 2004	FY 2005
Goshawk, Pygmy Nuthatch, And Spotted Owl Amount of Mature and Old-Growth Habitat	Applied management achieves desired stand characteristics for old-growth and indicator species do not significantly decrease Maintain habitat capability	Old-growth inventory, compartment exams and habitat capability modeling/ Acres Habitat capability model/Percent habitat capability	Annually Annually	None.	HQI analysis for the Mormon Lake Basin Project. APS 69 kV Powerline (Mogollon Rim District): 1% (15 ac) decrease in ponderosa pine. East Clear Creek Watershed: 5% loss of large trees in ponderosa pine on 22,600 ac Victorine WUI: 5% loss of large trees on 8,200 ac
Turkey • Habitat capability	Maintain habitat capability	Habitat capability model/habitat capability	Annually on 90% of affected projects	None	HQI analysis for the Mormon Lake Basin Project. APS 69 kV powerline: 1% (15 ac) decrease ECC Watershed : 5% loss of large trees in ponderosa pine on 22,600 ac Victorine WUI: 5% loss of large trees on 8200 ac
Turkey • Population Trend	Meet population goal	Arizona Game and Fish Department surveys/habitat capability modeling	Annually	Reviewed 2004 AGFD turkey information at the annual hunt recommendations meeting held 2/18/05. Drought had been affecting turkeys, but populations have improved some in the last couple of years.	Reviewed 2005 AGFD turkey information at the annual hunt recommendations meeting held 3/2/06. Overall, turkey population are doing well, but if this year's pattern follows the 2002 pattern, there will be little to no poult production due to extremely dry year.

Items Monitored	Intent	Monitoring Method Unit of Measure	Frequency	FY 2004	FY 2005
Turkey • Nesting Habitat	Maintain nesting habitat	On-the-ground evaluation	Annually and 5 year trend review	None	None
Red Squirrel Habitat Capability	Maintain habitat capability	Habitat capability model/habitat capability	Annually on 90% of affected projects	None	None
Elk & Mule Deer Habitat Capability	Maintain habitat capability	Habitat capability model/habitat capability	Annually	None	HQI analysis for the Mormon Lake Basin Project. Anderson Mesa Landscape Scale Assessment – identification and mapping of mule deer habitat using Terrestrial Ecosystem Survey. APS 69 kV powerline: 1% decrease for mule deer (39 ac) and 1% increase for elk (15 ac) ECC Watershed : Improve herbaceous veg and browse on 22,600 ac in ponderosa pine Victorine WUI: improve herbaceous veg and browse on 8275 ac
Elk & Mule Deer Population Trends and Distribution	Meet population goal	Arizona Game and Fish Department surveys/habitat capability model	Annually	Reviewed 2004 AGFD elk and mule deer information at the annual hunt recommendations meeting held 2/18/05.	Reviewed 2005 AGFD elk and mule deer information at the annual hunt recommendations meeting held 3/2/06

Items Monitored	Intent	Monitoring Method Unit of Measure	Frequency	FY 2004	FY 2005
Abert Squirrel Habitat Capability	Maintain habitat capability	Habitat capability model/habitat capability	Annually	30,000 acres surveyed on the Peaks and Mormon lake Districts	Mormon Lake Basin Project HQI Analysis APS 69 kV powerline: 1% (15 ac) decrease Victorine WUI: decrease of 1680 ac
Hairy Woodpecker Pygmy Nuthatch, & Yellow-Bellied Sapsucker Snag Densities, Sizes, and Species (Existing and Future)	Maintain habitat capability	Compartment exams, snag inventories, project reconnaissance and habitat capability modeling/acres	Annually	30,000 acres surveyed on the Peaks and Mormon lake Districts	Mormon Lake Basin Project HQI Analysis APS 69 kV powerline: 1% (15 ac) decrease MA3 ECC Watershed: loss of between 10-25% of snags across 22,600 ac Victorine WUI: loss of between 15 – 25% on 7000 ac
Plain Titmouse Amount of Mature and Old-Growth Pinyon-Juniper	Maintain habitat capability	Habitat capability model/ habitat capability	Annually		APS 69 kV powerline: 1% (39ac) decrease

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Snag Densities and Sizes of Pinyon-Juniper	Maintain habitat capability	Compartment exams, snag inventories, and project Reconnaissance/ acres	Annually		APS 69kV powerline: 1% (39 ac) decrease
Antelope Forage Availability	Maintain habitat capability	Production-Utilization surveys, habitat capability model/habitat capability	Annually and 9-13 years on each grazing allotment	Production studies completed on 3 allotments (103,000 acs) 33 allotments inspected.	Production studies conducted on 4 allotments (145,400 acs) 38 allotments inspected Anderson Mesa Landscape Scale Assessment – identification and mapping of habitat using Terrestrial Ecosystem Survey. APS 69kV powerline: <1% (4 ac) increase
Population Trends	Meet population goal	Arizona Game and Fish Department surveys/ Numbers	Annually	Reviewed 2004 AGFD pronghorn information at the annual hunt recommendations meeting held 2/18/05	Reviewed 2005 AGFD pronghorn information at the annual hunt recommendations meeting held 3/2/06
Cinnamon Teal Amount of Suitable Nesting Habitat	Maintain habitat capability	Field surveys (height density method) or score-cards/acres	Every 5 years on selected wetlands	Wetlands identified and classified for range NEPA on Anderson Mesa and potential teal nesting habitat identified	Wetlands identified and classified for range NEPA on Anderson Mesa and potential teal nesting habitat identified.

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Cinnamon Teal Nesting Success	Maintain habitat capability	Systematic field sampling, cooperative survey with Arizona Game and Fish Department/Numbers	Every 5 years on selected wetlands	None	Nine wetlands (Marshall, Prime, Vail, Pickett, Perry, Deep, Kinnickinick, Mormon , Lower Lake Mary) surveyed July – Sept Audubon Soc surveys on Mogollon Rim RD of Long, Hay, soldier and Soldier Annex lakes April – Nov: 114 cinn teal (19 in June)
Riparian Areas Lincoln's Sparrow, Lucy's Warbler, & Yellow-Breasted Chat Habitat Condition	Maintain habitat capability	Habitat capability modeling and systematic field sampling using riparian scorecard analyses/acres	5% of stream miles annually	Proper functioning condition assessments conducted on the Red Rock District at 3 springs and 1 stream	Proper functioning condition assessments conducted on the Red Rock District at 3 streams
Aquatic-Macro Invertebrates Species Diversity and Biomass	Maintain aquatic habitat effectiveness	Systematic field sampling (modified surber sampling)/	Every 5 years on selected streams	None	None

Items Monitored	Intent	Monitoring Method Unit of Measure	Frequency	FY 2004	FY 2005
Threatened And Endangered Species Amount of Suitable Habitat Population	Meet Federal regulation Meet recovery plan goals	Field surveys/Acres Field surveys, U S Fish and Wildlife Service surveys/Numbers	Annually Annually	<p>Mexican spotted owl- 36 PACs monitored</p> <p>MSO – 10,537 acres surveyed or monitored on the Peaks and Mormon Lake Districts</p> <p>MSO suitable habitat assessment of 4,135 acres on the Peaks and Mormon Lake Districts: 665 acres of restricted habitat identified</p> <p>MSO PAC monitoring on Mogollon Rim District of 19 PACs = 10,265 ac 20 adults, 4 young</p> <p>MSO inventory on Mogollon Rim District= 13, 395 ac</p> <p>Chiricahua leopard frog – 20 sites monitored</p> <p>Bald Eagle Midwinter Survey – 15 routes completed; 163,300 acs</p> <p>1 Bald Eagle site monitoring – Nestwatch Program</p> <p>Southwestern Willow Flycatcher - 4 sites surveyed on the Red Rock District</p> <p>Arizona cliffrose monitored along one trail on the Red Rock District.</p>	<p>Mexican spotted owl (MSO) – 29 PACs monitored</p> <p>MSO PAC monitoring on Mogollon Rim District (14 PACs = 7520 ac, 11 adults, 8 young)</p> <p>MSO inventory on Mogollon Rim District – 5610 ac</p> <p>Chiricahua leopard frog – 4 sites monitored</p> <p>Chiricahua leopard frog VES on Mogollon Rim District: 28 waters (stock tanks) = 28 acres; Jacks Canyon on Long Valley = 7.3 miles x 50 ft wider = 45 ac; no frogs.</p> <p>Bald Eagle Midwinter Survey – 18 routes</p> <p>1 Bald Eagle site monitoring – Nestwatch Program</p> <p>Southwestern Willow Flycatcher – 4 sites surveyed on the Red Rock District</p>

Items Monitored	Intent	Monitoring Method Unit of Measure	Frequency	FY 2004	FY 2005
Sensitive Species Amount of Suitable Habitat and Population Trends	Manage at appropriate levels to prevent listing as threatened or endangered species	Field surveys/ Acres	5 years	<p>Goshawk – 25 PFAs monitored</p> <p>Goshawk – 30,000 acres surveyed on the Peaks and Mormon Lake Districts</p> <p>Goshawk suitable habitat assessment of 4,135 acres on the Peaks and Mormon Lake Districts: 1000 acres identified as suitable nesting/roosting.</p> <p>Mog Rim RD: Northern goshawk inventory (no birds found) Upper Beaver FRP = 31,240.; Bald Mesa FRP = 4530 ac; APS 69 kV powerline = 660 ac</p> <p>6 peregrine falcon breeding areas monitored</p> <p>Upper Beaver FRP sensitive plants inventory of 1285 ac – found 19 ac of <i>Helenium arizonicum</i> and 8 ac of <i>Penstemon nudiflorus</i></p> <p>1 Breeding Bird Survey route (Happy Jack)</p> <p>AZ Bugbane monitoring (WFRP)</p> <p>6 Peregrine eyries monitored (WFRP report)</p> <p>Agave, crenulate moonwort, and Bebb's willow surveys (WFRP Report)</p> <p>2 Yellow-billed cuckoo sites surveyed</p> <p>5 Lowland leopard frog sites surveyed</p> <p>4 sites monitored for narrow-headed gartersnakes in Oak Creek Canyon in cooperation with USGS</p>	<p>Goshawk – 17 PFAs monitored</p> <p>Mog Rim RD: ECC land exchange goshawk inventory = 2000 ac</p> <p>Goshawk inventory for the Upper Beaver FRP: 37,430 ac, no goshawks found</p> <p>1 Breeding Bird Survey route (Happy Jack)</p> <p>Bebbs willow monitoring at Fern Mountain and Flagstaff pennyroyal monitoring permanent plots</p> <p>Confirm identity and monitor known populations of Arizona bugbane, Flagstaff penstemon, and Arizona sneezeweed</p> <p>14 Peregrine eyries monitored (WFRP Report)</p> <p>2 Lowland leopard frog sites surveyed</p> <p>4 sites monitored for narrow-headed gartersnakes in Oak Creek Canyon in cooperation with USGS</p> <p>Native fish monitoring in Fossil Creek</p> <p>Northern leopard frog VES (Visual encounter surveys) for the Upper Beaver FRP:28 waters (stock tanks) = 28 acres and Jacks Canyon on Long Valley = 7.3 miles x 50 ft wide = 45 ac, no frogs found</p> <p>Sensitive plants inventory of 1475 ac on the Upper Beaver FRP – found 1 ac of <i>Helenium arizonicum</i> and 4.6 ac of <i>Penstemon nudiflorus</i></p> <p>Mogollon thistle surveys= 55 ac, no new plants</p>

Items Monitored	Intent	Monitoring Method Unit of Measure	Frequency	FY 2004	FY 2005
Diversity Successional Stages of Major Vegetation Types	Meet Federal regulation (NFMA)	Compartment exams, field surveys, timber inventory, habitat diversity model/acres	Every 5 years	N/A	N/A CERS Phase I will examine
Habitat Imprvemnts Condition of Structural Imprvemnts	Identify those structures which must be reconstructed	Inspections/ structure	50% of structures per	Inspected and repaired Boynton wildlife water on the Red Rock District Inspected 8 and maintained 3 riparian bird habitat exclosures on Dry Beaver Creek	Visual inspection of Fossil Creek fish barrier Six guzzlers inspected by Arizona Game and Fish Department Inspected 8 riparian bird habitat exclosures on Dry Beaver Creek and modified 2 from wire to removable electric fence
Stream temperature of cold water fisheries	Monitor current conditions and effects of management practices on stream temperature to assure compliance with State water quality standards and tolerance levels for coldwater fish	Maximum temperature thermometers	All perennial cold water streams in the first decade Five projects annually	7 sites monitored including West Fork Oak Creek, Wet Beaver Creek, Sycamore Creek, Dane Canyon, Bear Canyon, Kehl Canyon, Miller Canyon	

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Permitted Use	Meet Federal regulation, check for term grazing permit and Plan compliance	Annual Grazing Statistical Report/ AUM's Forest-wide	Annually	132,885 AUMs permitted for grazing year	137,339 AUMs permitted for grazing year
Actual Use	Check compliance with term grazing permit, Allotment Management Plan (AMP), and Forest Plan	Grazing actual use record, permittee reports, and actual range counts/ AUM's Forest-wide	Annually	100,439 AUMs authorized for grazing year	75,018 AUMs authorized for grazing year
Capacity	Meet Federal regulation, determine sustained livestock stocking levels	Production and utilization surveys, range inspections/ AUM's Forest-wide	50% of Forest acres per decade	<ul style="list-style-type: none"> ▪ Production studies completed on 3 allotments (103,000 acres) ▪ 33 allotments inspected 	<ul style="list-style-type: none"> ▪ Production studies conducted on 4 allotments (145,400 acres) ▪ 38 allotments inspected
Range Condition and Trend	Meet Federal regulation, identify changes in range condition and trend, recommend changes in management, and determine shifts away from grass aspect due to overstory	Range analysis, transect data, photo plots, inspection records/ Acres	50% of Forest acres-per decade	Condition and trend studies conducted on portions of 4 allotments (26,052 acres)	Condition and trend studies conducted on portions of 4 allotments (12,030 acres)

Items Monitored	Intent	Monitoring Method Unit of Measure	Frequency	FY 2004	FY 2005
Allotment Management Plan Status	Meet Federal regulation, determine if permittee is compliance, and if AMP reflects current needs of resource	Actual use, permitted use, in capacity records, range analysis, production and utilization studies, and allotment inspections/ Plan	Yearly to once every 10 years per allotment	<ul style="list-style-type: none"> ▪ 36 allotments monitored to standard (95% of total) ▪ 33 allotments inspected for utilization with all but 3 allotments (11 key areas) meeting allowable use standards 	<ul style="list-style-type: none"> ▪ 26 allotments monitored to standard (68% of total) ▪ 38 allotments inspected for utilization with all but 1 allotment (1 key area) meeting allowable use standards
Condition of Structural Improvements	Meet Federal regulation, and identify those structures which must be reconstructed	Range inspections, range analysis, permittee reports Structure	50% of range structures per decade	0 inventoried or inspected	4,352 improvements inventoried or inspected (100%)
Condition of Nonstructural Improvements	Meet Federal regulation, and identify those vegetative improvements that require retreatment	Range inspections, range analysis, production and utilization surveys, and permittee reports/ Acre	50% of treated acres per decade	Not applicable – no non-structural range improvements to monitor	Not applicable – no non-structural range improvements to monitor
Forage Condition in Transitory Range	Determine and monitor added capacity created behind timber and firewood cuts	Range inspections, pre-sale review, compartment exams/ Acre	5-10 years on 50% of transitory acres	Not applicable – no transitory rangeland	Not applicable – no transitory rangeland

Items Monitored	Intent	Monitoring Method Unit of Measure	Frequency	FY 2004	FY 2005
Practices and Assumptions	Ensure that: -Regeneration is obtained within 5 years after final harvest cut and scheduled planting is accomplished or prior to final harvest cut when natural regeneration is planned.	Annual Reforestation/TSI Needs Report, plantation survival surveys, stand certification, silvicultural prescriptions, post-sale administrative review, Timber Management Information System (TMIS), Stand Data Base/Acres	Annually (plantation survival surveys are 1st, 3rd & 5 th growing seasons) or as scheduled. Annual stand certification for natural regeneration stands (5 th & 10 th years).	N/A	N/A
Timber Stand Improvement Acres and Assumptions	Ensure that: -- Scheduled TSI projects are accomplished Reduce insect and disease risk.	Silvicultural prescriptions, accomplishment reports, certified projects, Reforestation/TSI Needs Report, Stand Data Base/Acres	Annually	918 acres recorded SDB Compliance inspection showed that all acres were satisfactorily treated	2,179 acres recorded SDB Compliance inspection showed that all acres were satisfactorily treated

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Silvicultural Assumptions and Practices	Ensure that: -- Appropriate management is applied to Retention and Partial Retention zones and riparian areas, -- Rotation age and CMAI assumptions are correct, -- Silvicultural prescriptions follow management area standards, -- Silvicultural prescriptions precede vegetative treatments, -- Silvicultural prescriptions are practical and achieve desired results	Silvicultural prescriptions, EA's, project reviews	Annually	Formal review of silviculturist every 4 years Informal reviews annually	Formal review of silviculturist every 4 years Informal reviews annually
Timber Assumptions: Volume, Productivity, Condition Class, Acres Harvested	Ensure that: -- Board foot/cubic foot ratios are correct, -- Volume/acre yield is correct, -- Condition class assignments are correct, -- Schedule of acres harvested is correct	Sale review, EA's, cruise summaries, TMIS, compartment exams, stand data base Use the same conversion ratios as used in Plan calculations/ As appropriate	Annually	Review all Forest Supervisor authority timber sales. Use standard USFS timber cruising software.	Review all Forest Supervisor authority timber sales. Use standard USFS timber cruising software.
Size of Openings	Ensure that: -- Openings comply with size limits and are periodically evaluated for appropriateness	EA's, presale and administrative reviews, and post-sale reviews/ Project area	Annually	No openings > 4 acres	No openings > 4 acres

Items Monitored	Intent	Monitoring Method Unit of Measure	Frequency	FY 2004	FY 2005
Acres of Over-story and Final Removal Harvest	Meet Federal regulation, measure prescriptions and effects	TMIS, Staff review of 5% of treatment projects (at least 2 projects) /Acres	Annually	N/A	N/A
Acres of Intermediate Harvest	Meet Federal regulation, measure prescriptions and effects	TMIS, Staff review of 5% of treatment projects (at least 2 projects) /Acres	Annually	Informal review of harvest activities Greater Flagstaff Forest Partnership leading monitoring efforts for activities near Flagstaff. Surveillance and MSO micro-habitat plots installed	Informal review of harvest activities Greater Flagstaff Forest Partnership leading monitoring efforts for activities near Flagstaff. Surveillance and MSO micro-habitat plots installed
Board Feet of Net Sawtimber Offered, sold, and harvested	Meet Federal regulation, measure output, assure timber offered or available for offer meets, but does not exceed, the allowable sale quantity.	PAMARS (annual reporting system), programmed harvest reports/ MBF	Annually	32,514.73 CCF Documented in STARS and TSA Harvest < ASQ	48,061.77 CCF Documented in STARS and TSA Harvest < ASQ
Cords of Firewood Available	Ensure that: -- Green firewood is made available, -- Potential firewood from timber sales and road building is made reasonably available to the general public before slash disposal	Review annual total of firewood sale reports, firewood advertised but not sold, and free use/Cords	Annually	Documented in STARS and TSA and Free Use Report	Documented in STARS and TSA and Free Use Report

Items Monitored	Intent	Monitoring Method Unit of Measure	Frequency	FY 2004	FY 2005
Yield Projections	-- Ensure that: Yield projections are correct	Establish GSL studies in cooperation with RMFRES/ Permanent plots in regenerated stands/ MBF/acre and/ or trees/acre	First decade	N/A	N/A
Re-evaluation of Unsuitable Timber Lands	Evaluate the accuracy of suitable timberlands classification, periodically reexamine lands identified as not suitable for timber production to determine if they have become suited and could be returned to timber production	Review new or updated soil survey data, compartment exam, project plans, timber planning process/ Acre	Cover entire Forest in 1st decade (1/10 of Forest annually)	N/A	N/A

Items Monitored	Intent	Monitoring Method Unit of Measure	Frequency	FY 2004	FY 2005
Watershed Condition of Forest Lands	Meet Federal regulation, ensure that Forest watersheds in satisfactory condition by 2020, assure productivity of the land is maintained	Standard Watershed Condition Inventory according to R-3 Hydrology Note 14. Photo points, ocular estimates to determine trends/acres	10% annually	51 Sites in Fossil Creek -Verde, West Clear Creek and Beavercreek watersheds to establish baseline conditions and evaluate current conditions. 20 sites were located on the Fossil Creek allotment. Of the 20 sites, 1 was satisfactory, 2 were unsatisfactory, and 17 were impaired.	20 Sites in the Fossil Creek – Verde River watershed (in Fossil Creek allotment) to evaluate change in watershed conditions. Of the same 20 sites, 4 were satisfactory, 1 was unsatisfactory and 15 were impaired but improving signifying improved watershed condition through grazing rest in the Fossil Creek allotment portion of the watershed. The other 30 sites were not planned for 2005 monitoring so no changes or trends to report. Establishing baseline Forest-wide soil condition analysis using past and current data.
Watershed/Soils Prescriptions	Monitor projects to determine 1) compliance with recommendations and suitability of recommendations and Best Management practices, and 2) to ensure water quality standards are met	Review soil disturbing projects for compliance with Best Management Practices and water quality standards	Minimum of 1 project per District per year	Pack Rat Baseline Fire Monitoring.	Pack Rat Salvage Sale BMP Effectiveness Monitoring was completed (summary results (attached) in 3 cutting units Overall, there were no significant, adverse effects to intermittent streamcourses from the logging. Some BMP's were not implemented.

Items Monitored	Intent	Monitoring Method Unit of Measure	Frequency	FY 2004	FY 2005
	Monitor watershed condition in project areas	Standard watershed condition transects (per Hydro Note 14)/Project	1 Project/year Forest-wide	Jacket, Lizard and Mormon Fires baseline Treatment Project monitoring. Wilkens Pre-treatment monitoring (results attached).	Jacket, Lizard and Mormon monitoring (summary results attached) indicated low establishment of seeded species and ground cover over 1 year but very little cheatgrass or scotch thistle expansion. Success should be evaluated over 2-3 years but monitoring will likely cease due to insufficient funding. Wilkens Watershed Post-Treatment monitoring (photo points and Daubenmire transects were read) displaying an increase in ground cover and species diversity over 1 year with improved watershed condition.

Items Monitored	Intent	Monitoring Method Unit of Measure	Frequency	FY 2004	FY 2005
Riparian Improvement Projects	Resolve Issues at Forest level and meet Federal regulation; review riparian improvement projects for changes in ground cover, species composition, bank stability, stream flow and water quality changes, effectiveness of and compliance with recommendations	Standard watershed condition transects, ocular, estimates and professional judgment/ Project	1 Project/year Forest-wide	<p>Riparian livestock utilization monitoring on Oak, Spring, Fossil, West Clear, Walker, Wet and Dry Beaver Creeks occurred.</p> <p>No other improvement projects monitored.</p>	<p>The Verde Headwater Riparian Restoration Project was monitored for effects of high runoff and noxious weed infestation. Runoff did damage the elk-proof fence, but stream channel conditions were stable under very high flows. Mullein (<i>Verbascum sp</i>) and Bull thistle (<i>Cirsium vulgare</i>) were pulled on three separate occasions. The fence was repaired to keep ungulates from grazing the site.</p> <p>Riparian livestock utilization monitoring on Oak, Spring, Fossil, West Clear, Walker, Wet and Dry Beaver Creeks occurred.</p>

Items Monitored	Intent	Monitoring Method Unit of Measure	Frequency	FY 2004	FY 2005
Riparian Areas	Monitor condition and trend of riparian areas photo points	Standard watershed condition transects, ocular, estimates, photo points	5 percent annually	<p>At least 4 baseline Proper Functioning Condition Assessments completed on Sycamore Creek and various springs to evaluate current conditions and establish a baseline for future change detection.</p> <p>Photo-point monitoring on 4 stream locations to detect change in riparian conditions.</p> <p>Stream gage monitoring performed monthly on Sheepshead Creek, Sycamore Creek, Miller Canyon, Yeager, Barbershop, and East Clear Creek. Results to be used for procurement of water rights (documentation attached). The purpose of gaging the flow is to collect sufficient data to acquire in-situ instream flow water rights for recreation, fisheries and wildlife use resulting in riparian area, water quality and quantity protection.</p>	<p>At least 8 baseline Proper Functioning Condition Assessments completed on Oak Creek, Jacks Canyon, Spring Creek and 1 spring to evaluate current conditions and establish a baseline for future change detection.</p> <p>Photo-point monitoring on 4 stream locations to detect change in riparian conditions.</p> <p>Stream gage monitoring performed monthly on Sheepshead Creek, Sycamore Creek, Miller Canyon, Yeager, Barbershop, and East Clear Creek. Results to be used for procurement of water rights</p>
Road Obliteration	Ensure compliance with Standards and Guidelines concerning road densities Forest Issue related	Work accomplishment reports/ Miles	Annually (Report in years 3, 6, 9)	33.7 miles	24 miles

Items Monitored	Intent	Monitoring Method Unit of Measure	Frequency	FY 2004	FY 2005
Water Quality	Ensure compliance with Standards and Guidelines, State and Federal Water Quality Standards	Fecal coliform sampling at sites designated for full body contact	3 Sites Annually	<p>At least 3 sites along Oak and Spring Creeks by Friends of Forest. Results indicated water quality within standards (see ADEQ website below for summary results).</p> <p>Stream temperature monitoring at 9 sites (summary of results attached) including East Clear Creek, Wet Beaver Creek, West Fork of Oak Creek, West Clear Creek, Sycamore Creek, Bear Canyon, Dane Canyon, Kehl Canyon and Miller Canyon. The purpose of this monitoring is to determine stream temperatures and their relationship to both cold and warm-water fishery habitat.</p> <p>Other water quality monitoring performed by ADEQ at fixed stations. Sites (attached document) and results found on this link..</p> <p>http://www.azdeq.gov/environ/water/assessment/2004.html</p>	<p>At least 3 sites along Oak and Spring Creeks by Friends of Forest. Results indicated water quality within standards (see ADEQ website below for summary results).</p> <p>Other water quality monitoring performed by ADEQ at fixed stations. Sites (attached document) and results found on this link..</p> <p>http://www.azdeq.gov/environ/water/assessment/2004.html</p>

Items Monitored	Intent	Monitoring Method Unit of Measure	Frequency	FY 2004	FY 2005
Compliance with Terms of Minerals Operating Plans	Meet legislative mandate and Agency guidelines	Field checks/ Plans	Annually	Currently we have a minimal amount of mining operations and some do not operate in any given year. In 04 we did field checks and evaluated plans for about four operations.	Currently we have a minimal amount of mining operations and some do not operate in any given year. In 05 we did field checks and evaluated plans for about four operations.
Non-patented Mining Claim Compliance	Minimize illegal mining activity	Field checks, BLM file checks	Annually	We made field checks and as needed BLM file checks across the forest to identify if there were any illegal mining operations or any operations that needed to be put under a plan of operations. There is not an issue with illegal mining activity on the forest. There is minimal mining activity in general across the forest.	We made field checks and as needed BLM file checks across the forest to identify if there were any illegal mining operations or any operations that needed to be put under a plan of operations. There is not an issue with illegal mining activity on the forest. There is minimal mining activity in general across the forest.

Items Monitored	Intent	Monitoring Method Unit of Measure	Frequency	FY 2004	FY 2005
Special Use Permits	Process and administer special use permits in accordance with established guidelines	Land Uses Report (LUR), field inspections/ Permits Permits are now tracked and processed through SUDS.	Annually	Lands budget reductions have reduced the amount of field inspections, permits are still being processed in accordance with standards. The forest is using more collection agreements to cover the costs of doing this work. The amount of new permits is increasing as the communities within the forest grow and do more development. There are about 900 land use permits on the forest.	Same as 04, with an increase in the number of total forest permits to 923

Items Monitored	Intent	Monitoring Method Unit of Measure	Frequency	FY 2004	FY 2005
Land Purchase, Acquisition, and Exchange	Consolidate Forest lands and meet public needs	Forest Land Adjustment Plan ,MAR target/ Cases	Annually	Forest has been working with the forest land adjustment plan to meet funded land adjustment targets. Reported target for this year were modified because the Belmont shooting exchange was canceled as a result of litigation. Accomplished 88 acres in the Hancock exchange. Exchange work is being tied to projects where there is a collection agreement or there is legislative direction.	Forest worked on completing the Sedona sale, under the AZ Improvement Act. Also completed Mule Park exchange and Camp Verde townsite for a total of 629 acres. This was above the forest target of 468 acres.

Items Monitored	Intent	Monitoring Method Unit of Measure	Frequency	FY 2004	FY 2005
Occupancy Trespass	Minimize Forest trespass problems	Field checks, landline location/ Cases resolved vs. new cases	Annually	Because of budget limitations we have been doing less work in this area. The increase in development on private in holdings and properties adjacent to NF System land has generated an increase in Forest trespass problems. We have been resolving about the same amount of cases each year but the number of new cases is increasing as is the number of unidentified trespasses due to reduced field checks. Funding issues have required the Forest to utilize collection agreements with land owners to facilitate the processing of Small Tracts Act cases.	Same as 04 response.

Items Monitored	Intent	Monitoring Method Unit of Measure	Frequency	FY 2004	FY 2005
Landline Location	Maintain Forest boundary	Landline location, MAR target/Miles	Annually	We met our MAR target for landline location it was a mile and a half. The reduced lands budget and timber program is reducing the amount of land line work being funded on the forest. The need for land line survey and maintenance is growing as the urban interface develops along the forest boundary.	We did not have a target for landline location. Lands funding is dropping and so are the targets.

Items Monitored	Intent	Monitoring Method Unit of Measure	Frequency	FY 2004	FY 2005
Arterial/ Collector, Construction/ Reconstruction	Ensure compliance with identified needs for arterial/collector reconstruction Forest Issue related	Work accomplishment reports/ Miles	Annually	325 miles of Maintenance No reconstruction or construction	250 miles of Maintenance No reconstruction or construction
Purchaser Credit Roads	Ensure compliance with identified needs for P/C construction/reconstruction	Work accomplishment reports/ Miles	Annually	0	0

Items Monitored	Intent	Monitoring Method Unit of Measure	Frequency	FY 2004	FY 2005
Growth Reduction and Mortality Caused by Insect and Disease Infestations	Ensure endemic and introduced infestations do not become epidemic Reduce adverse effects of dwarf mistletoe	Integrated Pest Management aerial observation by R O entomologists, compartment exam, project inspections and reviews/Acres, Forest-wide	Annually	Annual Flight, assessed with R3 Forest Health revealed significant aspen mortality due to drought	Annual Flight, assessed with R3 Forest Health revealed significant Douglas fir mortality due to drought and insects
Air Quality	Ensure prescribed fire does not cause violations of State and Federal air quality standards in sensitive areas	Project reports, field monitoring	Annually	No violations per Arizona Departments of Environmental Quality (ADEQ) Field Monitoring is consistent with guidelines set in FSM 5100, Chapter 5140 – Fire Use	No violations per Arizona Departments of Environmental Quality (ADEQ) Field Monitoring is consistent with guidelines set in FSM 5100, Chapter 5140 – Fire Use
Fuel Treatment Outputs	Ensure balanced fuel treatment outputs, emphasizing utilization	Accomplishment reports/ Acres	Annually	WUI Acres treated (16,492) Non-WUI treated (0)	WUI acres treated (10,325) Non-WUI-acres-treated (6,134)
Wildfire Acre PAR's	Ensure wildfire acres are within projected annual burned acres period and by Fire Management Zone where acres are not specific to MA's	Reports/ Acres	Annually	A Fires 318 B Fires 35 C Fires 6 D Fires 0 E Fires 0 F Fires 0 G Fires 1 Total Acres Burned 18,717	A Fires 263 B Fires 56 C Fires 4 D Fires 2 E Fires 0 F Fires 0 G Fires 0 Total Acres Burned 1,305

Items Monitored	Intent	Monitoring Method Unit of Measure	Frequency	FY 2004	FY 2005
Cost of Suppression, Protection, Organization, and Net Value Change	Keep fire management program cost effective	PAMARS/ Dollars \$4,000,000 each Fiscal Year	Annually	Suppression costs were minimized as much as possible to meet objectives in maintaining resource effectiveness and safety guidelines during suppression activities.	Suppression costs were minimized as much as possible to meet objectives in maintaining resource effectiveness and safety guidelines during suppression activities.
Fire Suppression Effectiveness	Meet Federal regulation and measure prescriptions and effects	Periodic inspections and reviews to determine if fire management organization is effective in controlling fire losses within prescription; the use of the fire budget analysis process to determine fire management efficiency; and reviews of selected fires Annual inspections, periodic reviews, and use of fire budget analysis process as needed	Annually	Pre-season preparedness reviews are conducted and safety discussions held. After Action Reviews are held after each incident. Informal reviews are conducted periodically during the fiscal year to assess needs to the fire organization. Budget allocations for the Forest are discussed with Regional Office Fire Management to evaluate requirements for funding levels. Mid-year reviews are conducted to project funding needs and/or potential savings in the Preparedness Budget through the end of the FY. Spring and Fall fire leadership meetings are conducted to confirm fire program needs to meet operational objectives for fire suppression. Objectives.	Pre-season preparedness reviews are conducted and safety discussions held. After Action Reviews are held after each incident. Informal reviews are conducted periodically during the fiscal year to assess needs to the fire organization. Budget allocations for the Forest are discussed with Regional Office Fire Management to evaluate requirements for funding levels. Mid-year reviews are conducted to project funding needs and/or potential savings in the Preparedness Budget through the end of the FY. Spring and Fall fire leadership meetings are conducted to confirm fire program needs to meet operational objectives for fire suppression. Objectives.

Items Monitored	Intent	Monitoring Method Unit of Measure	Frequency	FY 2004	FY 2005
Law Enforcement Person Hours	Improve law enforcement Forest Issue related	Professional evaluation of trend based on a review of case loads, solution rates and public complaints Based on: protection of cultural resources, Off-road Driving damage, firewood theft, dollar cost of vandalism and trends in user protection Update monthly using LEMARS	Annually	Not reported at the Forest level due to reorganization of Law Enforcement within Forest Service	Not reported at the Forest level due to reorganization of Law Enforcement within Forest Service

Items Monitored	Intent	Monitoring Method Unit of Measure	Frequency	FY 2004	FY 2005
Citizen Participation Plans Public Affairs Standards	Measure responsiveness to potentially affected interests	Citizen Participation Plan and Public Affairs Plan review/ Completed contacts and actions	Quarterly	<ul style="list-style-type: none"> • Childs Irving Powerplant Decommissioning • Fossil Creek Fish Restoration • Weed EIS • Fuels Reduction Projects • Lowell Discovery Telescope • Snowbowl • Sedona National Scenic Area Designation • Red Rock Pas • Red Rock/Verde Valley Admin Site Sales • OHV use • Special Use Regulations • Anderson Mesa LSA • Grazing 	<ul style="list-style-type: none"> • Yavapai Ranch Land Exchange • Centennial Projects • Continuation of 2004 projects

Items Monitored	Intent	Monitoring Method Unit of Measure	Frequency	FY 2004	FY 2005
Verification of Unit Cost Used in Plan Compared to On-the-Ground Cost	Acquire accurate cost data	Actual costs from a representative sample of projects and programs including both force account and contract Discount to 1982 dollars for comparison to Plan costs/Dollars	Annually	Budgeting process changed – can no longer track in the same manner	Budgeting process changed – can no longer track in the same manner
Effects of Management on Adjacent Lands on National Forest Goals and Objectives	Determine effects of management of other ownership on Forest Plan	Reports from appropriate resource monitoring items, review of other Agency plans, new issues	Every 5 years	Implement projects consistent with Coconino County Plans	Implement projects consistent with Coconino County Plans

Trends

The Coconino National Forest Plan was approved in 1987. We are currently preparing for revision of the Forest Plan. Some of the major changes/trends that have occurred since 1987 include:

Drought and insect infestation has resulted in the death of many trees across the landscape.

Recreational use increased at a higher rate than anticipated. New types of recreational use such as mountain biking and climbing are occurring. Off road travel has increased resulting in damage to vegetation and creation of non-system roads and trails.

There has been a major shift in emphasis from timber production to vegetative treatments for healthy forest conditions and reduction of hazardous fuels reduction for protection of communities.

There has been a dramatic increase in the size of catastrophic wildfires. The Forest Plan does not contain direction regarding application of standards and guidelines for post-wildfire management.

The need for road reconstruction/construction decreased with decreasing timber harvesting. The road issues have shifted to maintenance.

We have also changed our methods for monitoring and budgeting. The current monitoring plan should be revised to reflect the discontinuance of RIM, PAMARS, PARS, TMIS, and LUR. These have been replaced with new methods and databases such as NVUM, TRACS, LAC, STARS, TSA, and SUDS.