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Monitoring and Evaluation Report

FY2013

Coconino National Forest

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Introduction and Forest Supervisor Certification

This report provides monitoring information for fiscal year 2013, as required by the Coconino National Forest's amended 1987 Land and Resource Management Plan (Forest Plan). The intent of the monitoring and evaluation report is to inform the decision maker and the public of progress toward achieving the goals, objectives, and standards and guidelines.

The information provided in this report follows Table 14 in Chapter 5: Monitoring Schedule of the Forest Plan. Monitoring items that have changed or are no longer relevant are noted where they apply.

I have reviewed the Coconino National Forest's Monitoring and Evaluation Report for fiscal year 2013. This Monitoring and Evaluation Report meets regulatory requirements for completing an annual report. Amendments or revisions to the Forest Plan are not likely to be made as a result of this report. Instead, information from this report will be used in the Coconino National Forest Plan revision process currently underway.

M. Earl Stewart — 8 Oct 2014

M. Earl Stewart
Forest Supervisor

Date

Items Monitored	Intent	Monitoring Method (Unit of Measure)	Measuring Frequency	Fiscal Year 2013 (FY13) Reporting Information
RECREATION				
Developed Site Use	Determine recreation use and demand.	Recreation Information Management (RIM) system use reports/RVD's	Annually	RIM system has been replaced by National Visitor Use Monitoring (NVUM) that provides day, overnight, general forest area, trail and wilderness use based on user surveys at these locations throughout the forest. The new measure is national forest visits. NVUM is completed on a 5 year cycle. The Coconino NF has data from 3 cycles: 2000, 2005, and 2010. NVUM showed a decrease in national forest visits from 2005 to 2010. Day use and general forest area use declined, but wilderness visits increased. Developed site use remained level, and this is confirmed by annual use data collected and reported at concessionaire operated sites. The most popular activities continue to be hiking/ walking, viewing the National Forest and relaxing. There was an increase in the downhill skiing that may reflect somewhat better winter precipitation as well as snowmaking.
Developed Site Condition	Prevent damage and deterioration. Meet health and safety requirements	RIM system facility condition reports, project reviews/facilities by RIM maintenance class	Annually	RIM system has been replaced by site condition surveys that are completed on a 5 year cycle. All sites are current. Site upgrades are very limited now. One new site, Dry Creek Picnic Area, was completed in 2013. Forest Lands Recreation Enhancement fees allow some facility upgrades or improvements to meet visitor service needs. Granger-Thye fee offset dollars from concessionaire permits also provide funding for maintenance projects. Emergency repairs are spread over several years. There are often increased costs with providing temporary facilities (such as portable toilets). Progress in decreasing deferred maintenance has slowed to almost none. Operation and maintenance of sites continues, but not all maintenance can be accomplished resulting in additional deferred maintenance.
Implementation of Recreation Opportunity Spectrum (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	ROS is regularly evaluated during project planning and critical items are monitored during implementation. ROS mapping was updated as part of forest plan revision. The new mapping is being used in project level evaluations. The forest began implementation of Travel Management this year and is focusing on map distribution, patrol and education. In addition, fuels reduction projects and increased use of fire are helping to restore recreation settings over time and make them more sustainable. Increased use in designated Wilderness may reduce opportunities for solitude in some places. ROS and WOS are being completed as part of the planning process for and will be included in the Fossil Creek Wild and Scenic River Comprehensive River Management Plan (CRMP).

Motor Vehicle Use	Impacts of motor vehicle use in designated camping corridors and prevalence of motorized use outside of designated areas.	Compliance will be measured through the collection and documentation of tickets, warnings, and incident reports. Impacts of motor vehicle use in designated camping corridors shall be measured based on field surveys.	Annually	Based on the observations of Forest Service field personnel, the camping corridors have had little effect to ground cover and the number of new spur roads in these areas. Monitoring of impacts in designated 300-foot motorized camping corridors in 2013 included data collection of 65 campsites along six designated camping corridors. This baseline data includes information on each campsite such as percentage of bare ground present, tree damage, and presence of litter and waste. Summary statistics show that surveyed camping corridors include both single and group-sized existing campsites (64.6% single and 35.4% group sites). These sites show, on average, light to moderate ground disturbance with minor tree damage and minor amounts of litter present Education and enforcement were practiced regularly using concentrated patrols to educate users on the motor vehicle rules and share information about travel aids available to them. The focus for enforcement has been on motor vehicle abuses that impact forest resources. Efforts taken in 2012 and 2013 to sign as closed and/or block motor vehicle access have proven most effective at discouraging motorized use outside of designated areas. For additional information see the Coconino National Forest Travel Management Monitoring Report
Dispersed Area Use and Experience Levels	Determine recreation use and demand.	RIM system/RVD's	Annually	RIM system has been replaced by NVUM. Survey data suggest a decrease in use in dispersed areas, but this cannot be confirmed with anecdotal evidence, as use of many general dispersed areas continues to be high especially over holidays and weekends. As travel management implementation continues, it is expected that there may be more evidence of concentrated use in camping corridors. If use begins to exceed provision of camping corridors, adjustments will need to be made in future years. Public comments received during travel management implementation indicate the public desires additional camping corridors be identified.
Dispersed Area Condition	Prevent unacceptable resource damage.	RIM system, project reviews/area condition	Annually	Anecdotal evidence and area survey data suggest travel management compliance is fairly good, although there are still places where motorized cross country travel is causing resource damage. Camping corridors in some places are heavily used, and others receive light to moderate use. Trash and lack of sanitation in some heavily used corridors lowers the condition of the recreation settings. The need for Leave No Trace education has been identified in some areas and visitor contacts are planned.
Trail Condition	Determine effectiveness of Forest Trails Program.	RIM system, project reviews, trail condition surveys/miles	Sample 20% Annually	RIM system has been replaced by Trail Assessment Condition Surveys (TRACS) completed annually on approximately 20% of randomly assigned trails. Districts complete Trail Management Objectives (TMO's) indicating the trail class and type of use by trail. These are compared with TRACS to prioritize trail maintenance and improvements. Declining budgets result in decreased ability to keep trails to standard. The Forest has a backlog of maintenance and reconstruction identified by condition survey results. Volunteers work with the Forest to provide some maintenance, and in some areas Adopt-a-Trail programs are established where partners are trained to assist the forest with trail maintenance and patrols.

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	Forest VQO standards and guidelines are outdated. The Forest completed Scenery Management System mapping in preparation for forest plan revision. This mapping is now being used for project level environmental analysis per handbook direction. The conversion reflects changes in use patterns, increased visibility of Coconino NF landscapes, and increased concern for scenic quality by visitors. Scenic stability is fair to poor in many locations due to overstocked forest conditions and lack of periodic fire. As restoration projects are implemented, an improvement in scenic stability is expected over time. A few locations in Schultz fire area are being replanted, helping speed recovery of forest settings where the landscape character was impacted by high severity wildfire.
Wilderness				
Wilderness Use	Determine wilderness use and demand	RIM system/RVD's	Annually	RIM system has been replaced by NVUM. The new measure is national forest visits. NVUM showed a 33% increase in total visits to wilderness between 2005 and 2010. Some wildernesses (Kachina Peaks, Red Rocks –Secret Mountain, Munds) exceed capacity in some areas. The forest is placing emphasis on improving overall management per the 10 year wilderness stewardship challenge. This year all wildernesses met the 80% stewardship mark. Invasive species and education plan implementation lag behind in implementation; these will become target areas in 2014.
Wilderness Condition	Minimize resource damage and changes of wilderness opportunity spectrum (WOS) classes, particularly primitive end	RIM system, Code-a-Site inventories, project reviews/area condition	Annually	RIM and Code-a-Site have been replaced with updated inventory protocols for the 10 elements of the 10 Year Wilderness Stewardship Challenge. The Coconino NF is working to improve its management to meet and in some places exceed the basic standards. Wilderness intrusions are recorded. Requests for management activities in wilderness are evaluated using the Minimum Requirements Decision Analysis. Some wildernesses (Kachina Peaks, Red Rocks- Secret, Wet Beaver) exceed WOS capacity in some areas.

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CULTURAL RESOURCES				
Cultural Resource Compliance Project	Meet Federal regulation; ensure project compliance with guidelines.	Approved cultural resource clearance for each ground-disturbing activity.	Annually	Approximately 117 projects received cultural resources review and clearance and 103 sites were monitored in FY 2013. These efforts resulted in approximately 27 sites being recorded and 653 acres being surveyed (1.0 sq. mi.) In the course of doing surveys, another 418 acres (0.7 sq. mi.) were re-examined, finding no new sites and confirming our continued reliance on the results of previous Forest surveys. 17 sites were determined eligible and six sites were determined not eligible for the National Register of Historic Places. **Native American Graves Protection and Repatriation Act (NAGPRA)** In FY 2013, the Forest conducted its fourth year of repatriating prehistoric burials and burial-related artifacts, in compliance with the Native American Graves Protection Act. **Non-Project Site Inventories** Four archaeological survey projects were conducted on the Forest in FY 2013 that were not related to Section 106 project clearance requirements. All were conducted by volunteers on multiple-year, on-going projects that have been in progress for five or more years. These are more fully described under Volunteer Projects, below.
Cultural Resource Property Protection	Protect significant properties.	Patrol areas in conjunction with other duties/Site condition	Annually	The Forest is an active participant in the Arizona Site Stewards Program, where volunteers periodically monitor sites on the Forest. There are currently 110 sites and 55 Site Stewards enrolled in the program. National Historic Preservation Act, Sec. 106 Monitoring: 21 archaeological sites were monitored as part of compliance work on eight projects. No sites were found damaged by project-related activities. National Historic Preservation Act, Sec. 110 Monitoring: 14 Priority Heritage Asset Sites, listed on the National Register of Historic Places, were monitored. 60 other sites that were not Priority Heritage Assets were also monitored. One other site was found vandalized (door stolen).

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WILDLIFE				
Northern goshawk, Pygmy nuthatch, and Mexican spotted owl (MSO)- Amount of Mature and Old-Growth Habitat	Applied management achieves desired stand characteristics for old-growth and indicator species do not significantly decrease.	Old-growth inventory, compartment exams and habitat capability modeling/Acres.	Annually	**Amount of Mature and Old Growth Habitat:** **Ponderosa Pine:** The most recent FIA data available (2001-2005) indicates that approximately 253,407 acres (32%) of the forest type is in the late seral stage. **Mixed Conifer and Spruce-fir:** FIA data (2001-2005) indicate that approximately 7,750 acres (7.7%) of these forest types are in late seral stages.
	Maintain habitat capability	Habitat capability model/percent habitat capability	Annually	**Northern goshawk (*Accipiter gentilis*) and Pygmy nuthatch (*Sitta pygmaea*):** The primary cover type used by the goshawk and pygmy nuthatch is ponderosa pine. Forest-wide, the trend for late seral ponderosa pine is increasing slightly. Although the age class distribution is shifting slightly, the proportion of the forest in uneven-aged conditions has stayed about the same. **Mexican spotted owl (*Strix occidentalis lucida*):** The MSO is tied to old-growth mixed conifer and ponderosa pine-gambel oak (pine-oak) habitats. Pine-oak represents approximately 40% of the ponderosa pine type. Although the amount of old-growth pine-oak is not known, it is assumed to be roughly proportional to the amount of old-growth in the PNVT; therefore, an estimate of old-growth pine-oak is 101,363 acres (40% of 253,407 acres). Forest-wide, the trend for the amount of late seral mixed conifer and spruce-fir is increasing slightly, and these forest types are moving towards more even-aged structure.
Turkey				
Habitat Capability	Maintain habitat capability	Habitat capability model/habitat capability	Annually on 90% of affected projects	The primary cover type used by turkeys is ponderosa pine. The Forest-wide trend for late seral ponderosa pine is increasing slightly. The most recent FIA data available (2001-2005) indicates that approximately 253,407 acres (32%) of the forest type is in the late seral stage.
Population Trend	Meet population goal	Arizona Game and Fish Department (AZGFD) surveys/habitat capability modeling	Annually	Because estimating actual population size is difficult, the Arizona Game and Fish Department (AGFD) has been using 1) the percent of archery hunters seeing turkeys during archery elk hunts, and 2) the number of turkeys harvested during the spring to estimate population trends. Data on percent hunters observing turkey and harvest data are available for 1997-2010. The available information indicates a variable, yet fairly stable turkey population on the Forest. Flagstaff Ranger District: Presence/absence data were collected during northern goshawk (NOGO) surveys totaling 7,735 acres on the Dry Lake Hills and 3,146 acres of the Mormon Mountain project areas. Mogollon Rim Ranger District: Sign and presence of turkeys were recorded during northern goshawk surveys on 37,000 acres.
Nesting Habitat	Maintain nesting habitat	On-the-ground evaluation	Annually and 5 year trend review	None completed in FY2013.

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Red Squirrel Habitat Capability	Maintain habitat capability	Habitat capability model/habitat capability	Annually on 90% of affected projects	The red squirrel is a Management Indicator Species (MIS) for late seral mixed conifer and spruce-fir. FIA data (2001-2005) indicate that approximately 7,750 acres (7.7%) of these forest types are in late seral stages and the Forest-wide trend for late seral mixed conifer and spruce-fir is increasing slightly. Forest structure is moving towards more even-aged conditions. Flagstaff Ranger District: Presence/absence surveys were conducted during NOGO surveys totaling 10,881 acres. Coordinates were taken at each location of red squirrel middens and middens were mapped to help with post treatment monitoring of red squirrels. Mogollon Rim Ranger District: Sign and presence of red squirrels were recorded during northern goshawk surveys on 37,000 acres.
Elk and Mule Deer				
Habitat Capability	Maintain habitat capability	Habitat capability model/habitat capability	Annually	**Elk:** Elk was selected as a big-game indicator species for early-seral stage pinyon-juniper, ponderosa pine, mixed conifer and spruce-fir habitat types. Although changes in acreage or percent are not large, early seral stages of all indicator habitats for elk are increasing slightly. **Mule deer:** The mule deer was selected as an indicator species of early-seral stages of aspen and pinyon-juniper woodlands. Early seral aspen is declining. Although some early seral aspen is being created through wildfire, most are not surviving to be recruited into the population. Forest-wide, early seral pinyon juniper is increasing slightly.

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Population Trends and Distribution	Meet population goal	AZGFD surveys/habitat capability model	Annually	**Elk:** AGFD uses a combination of annual survey data and population estimates derived from computer simulation modeling (see Figure 2) to evaluate trends in elk populations. AGFD is careful to note that many of the data inputs and assumptions lack the accuracy and precision for reliable model estimates; therefore, results should only be taken as gross population estimates and not as absolute numbers (Arizona Game and Fish Department 2011). Additionally, game management units are not closed systems for elk, and immigration and emigration is common but unmeasured; however, the modeled estimates have comparative value in establishing trend when compared from year to year (Arizona Game and Fish Department 2011). Consequently, AGFD recommends greater emphasis on trends rather than absolute numbers. Population trend estimates are available from 1988 through 2009, and the overall elk population trend on the Coconino National Forest is currently stable to increasing. Flagstaff Ranger District: Presence/absence surveys were conducted during NOGO surveys and totaled 10,881 acres. Mogollon Rim Ranger District: Sign and presence of elk were recorded during northern goshawk surveys on 37,000 acres. **Mule Deer:** The AGFD uses two indicators for mule deer population trend: 1) the number of mule deer observed during annual surveys, and 2) number of fawns per 100 does. These two indicators are used because they are more reliable than population modeling estimations for mule deer. On the forest, the current population trend for mule deer is declining. Flagstaff Ranger District: Presence/absence surveys were conducted during NOGO surveys, totaling 10,881 acres. Maintenance of closures for the Pinegrove and Rattlesnake Canyon Quiet Areas occurred to limit disturbance to deer and elk during critical time periods. Mogollon Rim Ranger District: Sign and presence of mule deer were recorded during northern goshawk surveys on 37,000 acres.
Abert's Squirrel Habitat Capability	Maintain habitat capability	Habitat capability model/habitat capability	Annually	The Forest Plan designates the Abert's squirrel as a management indicator species for early seral stage ponderosa pine forests and FIA data (2001-2005) indicate that approximately 93,444 acres (11.8%) of the ponderosa pine type is in early seral stages. The Forest-wide trend for early seral ponderosa pine is slightly increasing. Although the age class distribution is shifting slightly, the proportion of the forest in uneven-aged conditions has stayed about the same. Although identified as an indicator for early seral ponderosa pine habitat, Abert's squirrels use a variety of age classes, and research from several locations has shown strong habitat associations with mature ponderosa pine.

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Hairy woodpecker, Pygmy nuthatch & Red-naped sapsucker (formerly known as 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	**Ponderosa Pine Snags:** The number of snags >18 inches diameter at breast height (dbh) ranges from 0.5 - 1.2 per acre. **Mixed Conifer and Spruce-fir:** The number of snags >18 inches dbh ranges from 1.1 - 2.8 per acre. **Aspen:** Overall, aspen snags are increasing on the Forest. Flagstaff Ranger District: Presence/absence surveys were conducted during NOGO surveys totaling 10,881 acres. Mogollon Rim Ranger District: Presence of Hairy woodpecker, Pygmy nuthatch, Red-naped sapsucker and snag densities were recorded in 37,000 acres during northern goshawk surveys.
Plain (Juniper) Titmouse				
Amount of Mature and Old-Growth, Pinyon-Juniper	Maintain habitat capability	Habitat capability model/habitat capability	Annually	The most recent FIA data available (2001-2005) indicates that approximately 391,630 acres (65.2%) of the forest type is in the late seral stages. Overall, the Forest-wide trend in late seral stage is stable, and stands are trending towards more even-aged conditions.
Snag Densities and Sizes of Pinyon-Juniper	Maintain habitat capability	Compartment exams, snag inventories, and project reconnaissance/acres	Annually	The most recent FIA data available (2001-2005) show there are an average of 2.4 snags per acre in the 12-17.9 inches diameter at root collar (drc) size range, and 1.4 snags per acres that are 18+ inches drc. Overall, the density of pinyon-juniper snags in all age classes is increasing, but the quality and longevity of snags is decreasing.
Pronghorn antelope				
Forage Availability	Maintain habitat capability	Production-Utilization surveys, habitat capability model/habitat capability	Annually and 9-13 years on each grazing allotment	Condition and trend of grasslands can be determined from at least two primary data sources: 1) information being used in the Draft EIS for Forest Plan Revision on vegetation (PNVTs) and soils, and 2) Range Allotment Analysis and NEPA documents. Given high soil departure and vegetation and fire trends that are moving away from reference conditions, the Forest-wide trend for grasslands is stable to declining.
Population Trends	Meet population goal	AZFGD surveys/ Numbers	Annually	AGFD evaluates trends in pronghorn populations based on 1) annual surveys, and 2) model-derived population estimates. The two best indicators for pronghorn population trend come from the annual surveys and are 1) the number of pronghorn observed number of fawns per 100 does observed. Pronghorn population indicators have fluctuated since the late 1980's, with fawn:doe ratios showing greater fluctuation than number of pronghorn observed per hour. Within the range of fluctuations, the population trend appears to be relatively stable, with fawn:doe ratios increasing somewhat over approximately the last 10 years. Flagstaff Ranger District: No pronghorn habitat was systematically surveyed for presence/absence in FY13, but pronghorn were opportunistically monitored during northern goshawk presence/absence surveys that were conducted on 10,881 acres. Right-of-way fences were modified to encourage movement of pronghorn across highways 180 and 89N. Maintained and posted Anderson Mesa Wildlife closure intended to protect pronghorn during fawning season. Mogollon Rim Ranger District: Presence of pronghorn antelope was recorded in 37,000 acres.

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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	The current amount of wetland/cienega habitat is estimated to be 9,859 acres.
Nesting Success	Maintain habitat capability	Systematic field sampling, cooperative survey with AZGFD/numbers	Every 5 years on selected wetlands	None completed in 2013.
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	Overall, high elevation riparian habitat trend is stable, but a majority is highly departed from reference conditions. Low elevation riparian habitat trend is stable to improving. Red Rock Ranger District: Maintenance of various riparian exclosures was completed to protect riparian habitat from livestock grazing, including Stagestop (Dry Beaver Creek), Lower Oak Creek, Tissaw, Hance Spring, Deer Run Spring, Rattlesnake Wash (with VVBA exclosure), Walker Creek, Spring Creek, Holly Spring, Wet Beaver Creek, and Cottonwood/Mesquite Springs.
Aquatic-Macro Invertebrates - Species Diversity and Biomass	Maintain aquatic habitat effectiveness	Systematic field sampling (modified surber sampling)	Every 5 years on selected streams	The Forest-wide trend for macroinvertebrates is stable. Red Rock Ranger District The Arizona warm water Index of Biological Integrity (IBI) was used in a research study conducted by NAU to compare differences in the index and its metric scores between sites in the upper, middle, and lower reaches of Fossil Creek. Invertebrate sampling occurred at five sites on the creek in May, June, and August, during the summer emergence period. The site that had the greatest mean insect abundance and richness, Above Dam, (the furthest upstream site), was also the site with the greatest Index of Biological Integrity value (70.8). The two next downstream sites, Below Dam and Above Irving had similar but slightly decreased Index of Biological Integrity values compared to the Above Dam site at 59.4 and 63.2, respectively. The Purple Mountain site had the lowest IBI score of 43.1 which is below the attaining range. The combination of increased sediment loads and greater amount of embeddedness was a likely contributing factor in the low diversity, species richness, and abundance of aquatic macroinvertebrates at this site.

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Threatened And Endangered Species				
Habitat	Meet Federal regulation	Field surveys/ Acres	Annually	**Mexican Spotted Owl (MSO)** Flagstaff Ranger District: 9,310 acres surveyed and the forest-wide results are displayed below in the population section. Mogollon Rim Ranger District: 13,000 acres were surveyed (including project inventory and PAC monitoring) in Mahan, Clints, UBC, 4FRI Shelf stock and Tule timber sales and the forest-wide results are displayed below in the population section. Red Rock Ranger District: 600 acres were surveyed in Fay Canyon and the forest-wide results are displayed below in the population section.
				Chiricahua Leopard Frogs (CLF) (*Rana hiricahuensis*) Mogollon Rim Ranger District: Twenty-five water sources were surveyed for Chiricahua leopard frogs for the Mahan, Tule, UBC, and Clints projects. The results of these surveys are displayed below in the population section. Red Rock Ranger District: Fifty-four surveys for Chiricahua leopard frogs were conducted in FY13. The results of these surveys are displayed below in the population section.
				Yellow-billed Cuckoo (*Coccyzus americanus occidentalis)* Surveys were conducted at four locations: Marsh Lane, Cornville Bridge, Spring Creek, and Bull Pen on West Clear Creek. No cuckoos were detected.
				Listed Fish: Gila Topminnow (*Poeciliopsis occidentalis occidentalis*), Spikedace (*Meda fulgida*), and Loach Minnow (*Tiaroga cobitis*) Arizona Game and Fish and Forest Service biologists made several visits to both Holly Springs and Sheepshead Springs. These sites are being considered for Gila topminnow reintroduction. Temperature loggers were installed and monitored, as was pool depth. Arizona Game and Fish, Forest Service, and Bureau of Reclamation biologists made several visits to Spring Creek to determine potential barrier locations.
				Little Colorado Spinedace (*Lepidomeda vittata*) Spill surveys were conducted by AZGFD below C.C. Cragin Reservoir and downstream of Knoll Reservoir. Angling and above water visual surveys were conducted by AZGFD from the base of C.C. Cragin dam downstream to the confluence with Leonard Canyon and electrofishing surveys from the base of C.C. Cragin dam downstream to Forest Road (FR) 95 crossing and about a 1 mile stretch downstream of Mack's crossing. The results of these surveys are displayed below in the population section.

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				Fossil Creek Fish Five stock tanks in uplands above Fossil Creek were sampled by AZGFD in FY13. Soldier Mesa Tank, Sandrock Tank, Sandrock Draw Tank, Mack's #1 Tank, and Mack's #2 Tanks were sampled using a 50' bag seine, 15' straight seine, and dip nets to locate nonnative fish species. Of the five tanks sampled, only Soldier Mesa Tank contained nonnative green sunfish. Multiple size classes of green sunfish were captured in Soldier Mesa tank including ripe adults and young of year fish. Future work in Fiscal Year 2013-2014 will address removal approaches. On October 17, 2012, AGFD stocked 3,417 spikedace into the recently treated reach of Fossil Creek. About 1,822 went in below the temporary barrier and about 1,649 near the Purple Mountain Campground. Fish ranged in size from 20 to 60 mm total length. On August 28, 2013, AZGFD completed 48 individual snorkel surveys, which covered a total of 1,200 m in 4.81 km of lower Fossil. Two hundred forty-two spikedace were detected with size classes varying from 25 to 55 mm. The vast majority of the spikedace detected were greater than 40mm.Twenty of the spikedace were classified as under 40 mm and 46 of the spikedace were not classified into size classes. The lowermost spikedace was detected 2.3 km downstream of the uppermost stocking site (just downstream of Sally May Wash. Additionally, spikedace were found at both stocking locations (Purple Mountain and Sally May Wash) but were not detected upstream of the stocking location. The most spikedace detected in one transect was an estimated 50 individuals. Spikedace, for the time being, are persisting in lower Fossil. AZGFD also detected Gila topminnow from Mazatzal Pool upstream to Sally May pool. All size classes (greater and lesser than 10 mm) were detected. Additional anecdotal observations were recorded. Fish were first detected in the 'Narrows' portion of lower Fossil. These fish included chub less than 100 mm, as well as desert suckers less than 100 mm. Detections of chub and suckers increased as the survey progressed upstream. Predominantly, young, less than 100mm, chub and suckers were the most abundant size class, although occasionally, larger chub and suckers (greater than 150mm) were detected. The largest chub and suckers were found between Purple Mountain access point and Sally May Wash. On September 25, 2013, AGFD personnel stocked 951 loach minnow into Fossil Creek above the Fossil Springs Dam via helicopter with no mortalities observed.

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				Arizona cliffrose (*Purshia subintegra*) The Arboretum at Flagstaff continued with their annual revisits to a series of demographic plots to monitor Arizona cliffrose and its associated Region 3 sensitive species; Verde Valley sage (*Salvia dorrii* ssp. *mearnsii*), heath-leaf wild buckwheat (*Eriogonum ericifolium* var. *ericifolium*), Ripley's wild buckwheat (*Eriogonum ripleyi*) and Rusby milkwort (*Polygala rusbyi*). This is a long-term monitoring effort conducted by The Arboretum. Data are in draft form and will eventually be published by The Arboretum. Flagstaff Ranger District: The Flagstaff Ranger District established some monitoring points for Arizona cliffrose were established in the North Gyberg area of the Windmill West allotment.to assess the utilization of Arizona cliffrose by cattle grazing. Past monitoring has been inconsistent and the newly established plots are designed to comply with the Recovery Plan (1998). Red Rock Ranger District –Photo monitoring along the Lime Kiln Trail within the Verde Valley Botanical Area was conducted in 2013. The monitoring results reflect that 89% of the monitored plants were either in thriving, stable, or affected by reasons not associated with the trail or trail use and that there was a 5% net increase in the monitored population since 2010.
				San Francisco Peaks Ragwort (*Packera franciscana*) The Forest Botanist and volunteer assisted ecologists from the Rocky Mountain Research Station with remeasurement transects to collect data on density of San Francisco Peaks ragwort along the Weatherford Trail. These transects had been previously established and represent a repeated measurement with the goal of detecting a better estimate of the total number of plants in the alpine tundra habitat the species occupies. This information was used in the preparation of the Biological Assessment for snowmaking. Flagstaff Ranger District: Wildlife crew members surveyed the Humphreys Peak Trail and Arizona Snowbowl facilities September 16-19, 2013 for invasive weeds and San Francisco Peaks ragwort. Ragwort was located above timberline along the upper portion of the trail however, no invasive weeds were found in ragwort habitat. Cheatgrass (*Bromus tectorum*), an invasive plant, was found within the first mile of Humphrey's Trail. Another invasive plant, broadleaf toadflax (*Linaria dalmatica*) was mapped along the maintenance/APS corridor.
				Verde Valley Plant T&E The Plant Atlas Project (PAPAZ), a volunteer project to conduct floristic surveys in sensitive areas of the forest is ongoing. One area is the Verde Valley Botanical Are, which focuses on Arizona cliffrose and associated Region 3 sensitive species; Verde Valley sage (*Salvia dorrii* ssp. *mearnsii*), heath-leaf wildbuckwheat (*Eriogonum ericifolium* var. *ericifolium*), Ripley's wild buckwheat (*Eriogonum ripleyi*) and Rusby milkwort (*Polygala rusbyi*). Volunteers have contributed hundreds of hours and the project continues to make substantial contributions to the knowledge of the local flora in the area.

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Population	Meet recovery plan goals	Field surveys, U S Fish and Wildlife Service surveys/numbers	Annually	**Mexican Spotted Owl:** Total # Protected Activity Centers (PACs) on the Forest = 188 (Total # with Coconino NF PAC numbers; includes those shared with other landowners.) # PACs Monitored = 39 # PACs Known Occupied = 31 % PACs Monitored Occupied = 79 # PACs w/ Pairs = 28 # PACs w/ Known Young = 13 # New PACs = 1 (Fay Canyon PAC, Red Rock Ranger District). PAC not yet delineated. Fledged 1 young.
				Chiricahua Leopard Frog: Mogollon Rim Ranger District: Only northern leopard frogs were detected during the 25 water sources surveys for leopard frogs for the Mahan, Tule, UBC, and Clints projects. Red Rock Ranger District: Through the 13 site surveys conducted in October of FY13, it was discovered that frogs naturally moved from the five key breeding sites and colonized 10 new sites (Antelope {frogs relocated to Middle due to tank cleaning}, Freckle's, Pine, Charlies, Upper Boulder Canyon, Boulder Canyon side tributary, Boulder Springs area, downstream Boulder Springs, Partnership, and the drainage above Middle tank). Reproduction was confirmed at Pine Tank. Unoccupied tanks included Ed's, Powerline, and Buck. Through the 23 surveys at conducted at 22 sites in September of FY13, Chiricahua leopard frogs were detected at six sites (Slate/Natural tank [new site], Buck tank [new site], Boulder Canyon pools [2012], Pine Tank [2012], Pool 0.3 miles by Pine Tank [2012], Tin Can Tank [new site]) and Herbies [new site] with Reproduction was confirmed at two (Herbies and Tin Can) of those six sites. Of all the sites surveyed, crayfish were only detected at Gnat. FWS and AZGFD also monitored 18 sites in 2013. Nine sites (in addition to those above) had Chiricahua leopard frogs. Survey efforts show that habitat protection efforts (frog habitat fencing at five sites), along with relocation of salvaged and captive bred frogs has allowed for the expansion of frogs to similar levels documented before the devastating drought of 2002. These survey results support that the Buckskin Hills population of Chiricahua leopard frogs is a metapopulation; an important criterion for meeting part of the Recovery Plan for this species.
				San Francisco Peaks Ragwort: Flagstaff Ranger District: Wildlife crew members surveyed the Humphreys Peak Trail and Arizona Snowbowl facilities September 16-19, 2013 for invasive weeds and San Francisco Peaks ragwort. Ragwort was located above timberline along the upper portion of the trail however, no invasive weeds were found in ragwort habitat. Cheatgrass was found within the first mile of Humphrey's Trail and broadleaf toadflax was mapped along the maintenance/APS corridor.

Items Monitored	Intent	Monitoring Method (Unit of Measure)	Measuring Frequency	Fiscal Year 2013 (FY13) Reporting Information
				Little Colorado Spinedace: The spill surveys conducted by AZGFD below C.C. Cragin Reservoir showed no evidence of trout escapement from the reservoir in 2013. The only two trout caught were determined to be part of the self-sustaining wild population that exists in East Clear Creek. Green sunfish did increase, however, from surveys conducted in 2011, which suggests that either reproduction is occurring within the creek and/or green sunfish escaped from the reservoir during the spring runoff in 2013. Multiple size classes of green sunfish were captured, including young of year and sexually mature and ripe adult fish. Escapement of green sunfish from C.C. Cragin Reservoir pose a much greater threat to the native fish community of East Clear Creek than hatchery rainbow trout because the hatchery trout would have to compete with the self-sustaining wild population of rainbow trout that have adapted to living in a stream environment. 2013 is the first year trout have been caught downstream of Knoll Reservoir during spill surveys. A large pool near the confluence with the out flow from the spillway and Leonard Canyon itself may have held trout in the past but was too deep to sample in previous years. In 2013, runoff moved debris on the downstream side of this large pool reducing its overall depth allowing the backpack electrofishing unit to effectively sample it. Similarly, the spillway was dry during other sampling efforts except for this large pool. In 2013, several small pools held water and trout in the spillway itself. Angling and above water visual surveys were conducted by AZGFD from the base of C.C. Cragin dam downstream to the confluence with Leonard Canyon and electrofishing surveys from the base of C.C. Cragin dam downstream to Forest Road (FR) 95 crossing and about a 1 mile stretch downstream of Mack's crossing. Surveys during June 2013 downstream of C.C. Cragin Reservoir were conducted in an effort to confirm the presence of roundtail chub and to map species distribution and relative abundance of the fish community of East Clear Creek and to determine the extent to which nonnative species have dispersed below C.C. Cragin Reservoir. Green sunfish occupied 1.3 miles of East Clear Creek downstream of C.C. Cragin reservoir with ripe adults, young of year, and multiple size classes present. Roundtail chub occupied from just downstream of a natural falls (possible barrier) at the confluence with Yeager Canyon downstream to the confluence with Leonard Canyon. In all, 320 roundtail chub were encountered with multiple size classes present including young of year. In June 2013, AZGFD captured and transported 59 roundtail chub (*Gila robusta*) to Bubbling Ponds Hatchery (BPH) to serve as broodstock for propagation efforts in the Little Colorado River watershed. Roundtail chub collected from East Clear Creek were added to the 20 roundtail chub collected from Chevelon Canyon in 2012. Roundtail chub 150 millimeters in total length or smaller were collected as broodstock in an effort to keep breeding adults in the wild. Roundtail chub were collected from about a 1 mile stretch of East Clear Creek about 1.5 miles downstream of Mack's Crossing.

Items Monitored	Intent	Monitoring Method (Unit of Measure)	Measuring Frequency	Fiscal Year 2013 (FY13) Reporting Information
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	**Bald eagle** Wintering: Eighteen routes were surveyed during the annual Bald Eagle Midwinter Survey. Nineteen bald eagles and 1 unidentified eagle were counted. Nesting: All or a portion of 7 Breeding Areas occur on the Forest. Arizona Game and Fish Department 2013 survey results were: - Beaver: 2 Young Fledged - Coldwater: Occupied - Ladders: Nest attached by golden eagle; nestling went to rehab - Lower Lake Mary: 1 Young Fledged - Oak Creek: 2 Young Fledged -Tapco: Nest Failed - Tower: Unoccupied
				Southwestern Willow Flycatcher (*Empidonax extimus traillii*) A singing willow flycatcher was detected on lower Oak Creek on May 22. That reach of the creek was surveyed during the breeding season. The habitat was marginal and no willow flycatchers were detected, The individual willow flycatcher detected in May was most likely a migrating male.
				Bebb's willow (*Salix bebbiana*) and Blumer's dock (*Rumex orthoneurus*) Flagstaff Ranger District: A Bebb's willow exclosure (approximately 1 acre) was built in the Hart Prairie project. The Forest and The Nature Conservancy Hart Prairie Preserve monitored exclosures established for Bebb's willow and Blumer's dock. One set of exclosures monitors growth of a Bebb's willow cohort which was established through natural regeneration in the mid 1990's and was protected from grazing by the construction of fences. There are two exclosures, one on Forest Service land and one on The Nature Conservancy land. One of the challenges of assuring persistence of the unique high elevation riparian forest community formed by Bebb's Willow in Hart Prairie area is the lack of regeneration. Through protection and monitoring, we have been able to follow the establishment and growth of the young plants. The Blumer's dock benefitted from the protection of the exclosure. It was absent from the area but appeared in the exclosure once the area was protected. The total acreage of these two exclosures is less than one acre.
				Arizona bugbane (*Actaea arizonica*) Three Arizona bugbane sites were monitored. The plants were in good condition with no impacts observed. Monitoring is a requirement of the Conservation Assessment and Strategy for the species, which was prepared in 1995 and incorporated into the Forest Plan as part of amendment 12. The Conservation Assessment and Strategy and the accompanying Conservation Agreement mitigated the threat of listing the species as threatened or endangered. Red Rock Ranger District: An inventory was conducted on the lower end of West Fork Oak Creek and four populations of bugbane were mapped.

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				Northern Goshawk (NOGO) Flagstaff Ranger District: 3 Post Fledgling Family Areas (PFAs) were monitored. 2 were active with 1 juvenile confirmed. 10,881 acres were surveyed in the NOGO inventory Mogollon Rim Ranger District: 1 PFA was formally monitored, 3 were informally monitored. No signs of goshawks were found in any of the 4 PFAs. 49,200 acres were inventoried in Mahan and Tule (done by American Conservation Experience), and East Clear Creek projects; responses during inventories were associated with nearby existing PFAs vs. new territories.
				Lowland leopard frog (*Rana yavapaiensis*) Herpetological surveys of areas with potential habitat for Arizona toad, lowland leopard frog and/or Mexican gartersnake habitat were conducted at the following sites: downstream of Fossil Springs Dam, upstream of Fossil Springs Dam, Fossil Springs, and two surveys on Lower Spring Creek. Leopard frogs were detected at all the Fossil sites; none were detected at Lower Spring Creek.
				Northern Leopard Frog Flagstaff Ranger District: Four (4) sites were surveyed, and Northern Leopard frogs were detected at 1 site. Mogollon Rim Ranger District: 25 water sources were surveyed for leopard frogs in Mahan, Tule, UBC, and Clints projects, in addition to some incidental sites; northern leopard frogs were confirmed at 7 of these sites, 2 of which were new sites.
				Rare Invertebrates Red Rock Ranger District: Biologists from the Forest Service, US Fish, Wildlife Service, and Arizona Game and Fish surveyed several springs in Fossil Creek for Fossil Springsnails. Snails were detected at two of three sites inventoried. US Fish and Wildlife Service submitted their final report for their previous effort in Fossil Creek. Of the five sites discussed, snails were detected at three locations.
				Mexican Garter Snake (*Thamnophis eques*) Red Rock Ranger District: District biologist and volunteers visited seven developed recreation sites to give information regarding rare snake species to site hosts. Hosts were given information on venomous and non-venomous snakes, rare gartersnake identification, and snake relocation protocol (based on Nowak's research). Hosts were given handouts and species information. Hosts were refreshed on how to use supplied snake tongs and bucket for short relocations.

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				Narrow-headed Garter Snake (*Thamnophis rufipunctatus*) Flagstaff Ranger District: Surveyed West Fork of Oak Creek/Call of the Canyon w/ E. Nowak Aug 14. 1 Day Survey/0.5 miles of habitat. 2 adult and 3 juvenile narrow-headed gartersnakes were found. Also surveyed West Fork off of Woody Mountain Road and no narrow-headed gartersnakes were found. Northern Arizona University conducted narrow-headed garter snakes surveys on the Forest and were assisted by a Forest Service volunteer. In 2013, they conducted three surveys with a total of 63.3 person-hours. They found six wandering gartersnakes (T. elegans vagrans); four additional gartersnakes escaped before being identified to species. No narrow-headed gartersnakes were captured; however, it is likely that several of the individuals that escaped were the target species. During fisheries surveys downstream of C.C. Cragin, Arizona Game and Fish conducted pedestrian surveys for aquatic gartersnakes and amphibian species. No aquatic gartersnakes (narrow-headed or Northern Mexican) were encountered during surveys along East Clear Creek in 2013. Arizona black rattlesnakes (Crotalus ceberus) and terrestrial gartersnakes (Thamnophis elegans) were the only snake species encountered. Due to the large crayfish population that exists and the newly discovered green sunfish, survivorship of aquatic gartersnake species in East Clear Creek would be difficult. Red Rock Ranger District: District biologist and volunteers visited seven developed recreation sites to give information regarding rare snake species to site hosts. Hosts were given information on venomous and non-venomous snakes, rare gartersnake identification, and snake relocation protocol (based on Nowak's research). Hosts were given handouts and species information. Hosts were refreshed on how to use supplied snake tongs and bucket for short relocations.

Items Monitored	Intent	Monitoring Method (Unit of Measure)	Measuring Frequency	Fiscal Year 2013 (FY13) Reporting Information
				Bats Mogollon Rim Ranger District: No bat surveys were conducted in 2013. Red Rock Ranger District: Four surveys were conducted and 13 bats of 5 species were captured and released: two fringed myotis (*Myotis thysanodes*) were mist netted at SkeletonBone Tank, two big brown (*Eptesicus fuscus)* and one western pipestrelle (*Pipistrellus hesperus*) were mist netted at Lower Spring Creek at the end of May, one western pipestrelle, two big brown, four Yuma myotis (*Myotis yumanensis*), and one red bat (*Lasiurus blossevillii*)[a sensitive species] were mist netted at Lower Spring Creek mid-August, and a roost inspection of a roost on Cathedral Rock confirmed it was occupied by unknown number of bats. Northern Arizona University (NAU), under contract with Forest Service, mist netted Fossil Creek. The surveys were conducted on May 29 and June 12, 2013, by 13 people on four more areas in the lower Fossil Creek and adjoining uplands. Twenty-four individuals of the following five species were captured and released: pale Townsend's big-eared bat (*Corynorhinus townsendii*), big brown bat, red bat, pallid bat (*Antrozous pallidus*), and California myotis (myotis californicus). NAU also conducted acoustic monitoring, but had poor results distinguishing between species. However, the acoustic monitoring did capture two electronic signatures that were different from the five species that were captured and released. Flagstaff Ranger District: One survey was conducted at Dry Lake Tank 2 on July 3, 2013. Eight bats captured and released, yielding six different species. The species found were big brown bat, hoary bat (*Lasiurus cinereus*), silver-haired bat (*Lasiurus noctivagans*), southwestern myotis (*Myotis auriculus*), Arizona myotis (*Myotis occultus*), and western pipestrelle. One survey was conducted at Weimer Springs Tank on September 5, 2013. Twenty-seven bats captured and released, yielding eight different species. The species found were big brown bat, southwestern myotis (*Myotis auriculus*), long-eared myotis (*Myotis evotis*), Arizona myotis (*Myotis occultus*), fringed myotis, cave myotis (*Myotis velifer*), long-legged myotis (*Myotis volans*), and Yuma myotis.
				Peregrine Falcon (*Falco peregrinus*) One eyrie on the Mogollon Rim Ranger District was opportunistically monitored during marshbird surveys, but no occupancy was confirmed. Mogollon Rim Ranger District: One eyrie was opportunistically monitored during a marshbird survey, but no occupancy was confirmed. Red Rock Ranger District: A peregrine nest was reported and mapped near the West Fork Oak Creek confluence; nesting success unknown. The Tomahawk trail proposal near the Schnebly Hill pair was denied due to continually increasing recreation numbers and the eastward march of this pair's nest site selection. A local volunteer regularly hikes Cathedral and reports on a pair that nests in this area. In 2013, there was no confirmation of nesting by the Cathedral peregrines; only one adult was observed in the spring and there were not subsequent observations despite repeat trips. It was hypothesized that one of the adults died.

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Diversity - Successional Stages of Major Vegetation Types	Meet Federal regulation (National Forest Management Act (NFMA))	Compartment exams, field surveys, timber inventory, habitat diversity model/acres	Every 5 years	Stand exams were done to support efforts to obtain current conditions for proposed treatment areas and to allow the forest to model proposed actions for treatment projects . These stand exams are also used to validate the timber suitability determinations required by the NFMA in the current Forest Plan. Flagstaff Ranger District: total of 9,350 acres of stand exams were conducted (935 stand exams @ 10 acres per plot).The majority of these stand exams were conducted as part of the Flagstaff Watershed Protection Project. All stand exams were completed with satisfactory results meeting the requirements in the stand exam contract/handbook. Mogollon Rim Ranger District: total of 15,100 acres of stand exams were conducted (1,510 stand exams @ 10 acres per plot). The majority of these stand exams were conducted as part of the Mahan-Landmark Project. All stand exams were completed with satisfactory results meeting the requirements in the stand exam contract/handbook.
Habitat Improvements - (Condition of Structural Improvements)	Identify those structures which must be reconstructed	Inspections/ structure	50% of structures per _____	Red Rock Ranger District: Maintenance of various riparian exclosures to protect riparian habitat from livestock grazing was completed. Exclosures include Stagestop (Dry Beaver Creek), Lower Oak Creek and Tissaw, Hance Spring, Deer Run Spring, Rattlesnake Wash (within VVBA exclosure), Walker Creek, Spring Creek, Holly Spring, Wet Beaver Creek, and Cottonwood/Mesquite Springs. Structures that were identified as needed repairs included Jack's Canyon. Creek crossings along trails needing improvement include Huckaby and Allen's Bend. Huckaby Trail crossing was repaired by Friends of the Forest volunteers by winching in boulders across the channels so hikers step on the boulders instead of in the creek channel. Mogollon Rim Ranger District: Several exclosures that protect headwater meadows, aspen and maple stands were inspected by Forest Service and volunteers. Two dilapidated exclosures were completely rebuilt, 1 new exclosure was constructed for a new spring enhancement project, and 3 were maintained.
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 cold water fish	Maximum temperature thermometers	All perennial cold water streams in the first decade. Five projects annually.	There are currently no thermometers for recording stream temperatures, but work towards establishing some are in progress. The Arizona Department of Environmental Quality (ADEQ) routinely collects stream temperature during monitoring cycles and is the primary data used to determine cold water stream temperature and compliance with State Water Quality standards. In FY14, the forest plans to purchase several stream temperature tidbit gauges and plan to place them in ADEQ identified cold water fishery streams FY15.

Items Monitored	Intent	Monitoring Method (Unit of Measure)	Measuring Frequency	Fiscal Year 2013 (FY13) Reporting Information
Range O&M				
Permitted Use	Meet Federal regulation, check for term grazing permit and Plan compliance.	Annual Grazing Statistical Report/ Animal Unit Months (AUMs) Forest-wide	Annually	Permitted use levels of domestic livestock are re-evaluated periodically to ensure that the permitted use is in balance with other forest plan goals and desired conditions. These re-evaluations are most commonly conducted when an environmental analysis is conducted to consider re-authorizing grazing on a particular allotment. Through this process, permitted use has been adjusted (if necessary) over time to ensure continued compliance with the goals and desired conditions of the forest plan. AUMs permitted for the grazing year: • Flagstaff Ranger District: 45,700 • Red Rock Ranger District/Mogollon Rim Ranger District: 70,653
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	AUMs authorized for the grazing year: • Flagstaff Ranger District: 36,049 • Red Rock and Mogollon Rim Ranger Districts: 50,355. Actual use (86,404) did not exceed the permitted use (116,353) in FY13.
Capacity	Meet Federal regulation, determine sustained livestock stocking levels.	Production and utilization surveys, range inspections/AUMs Forest-wide	50% of Forest acres per decade	No production-utilization surveys were completed. Forage production surveys were conducted at 23 permanent monitoring locations on the Flagstaff Ranger District. Utilization monitoring and range inspections were conducted on 28 allotments: • Flagstaff Ranger District: 19 allotments, approximately 508,200 acres. This includes monitoring and inspections prior to the grazing season, during the grazing season, post grazing season, and at the end of the growing season. • Red Rock Ranger District/Mogollon Rim Ranger District: 9 allotments, approximately 675,754 acres. This includes monitoring and inspections prior to the grazing season, during the grazing season, post grazing season, and at the end of the growing season
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	Range/vegetation condition and trend studies were conducted on 4 allotments, approximately 392,656 acres: • Flagstaff Ranger District: 1 allotment (51,584). The results from this data collection are being analyzed as part of the Angell Allotment grazing permit renewal and will be used to determine future livestock grazing management through that process. • Red Rock Ranger District/Mogollon Rim Ranger District: 3 allotments (Apache Maid, Bar T Bar and Walker Basin), approximately 341,072 acres. The results from this data collection will be analyzed at the time of grazing permit renewal on these allotments and will be used to determine future livestock grazing management through that process.

Items Monitored	Intent	Monitoring Method (Unit of Measure)	Measuring Frequency	Fiscal Year 2013 (FY13) Reporting Information
Allotment Management Plan (AMP) Status	Meet Federal regulation, determine if permittee is in 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	689,134 acres on 33 active allotments were administered to standard (46% of total acres within active allotments). Flagstaff Ranger District: • 344,588 acres on 23 active allotments were administered to standard. • Actual use was 79% of the permitted use. • Utilization monitoring and range inspections were conducted on 28 allotments. This includes monitoring and inspections prior to the grazing season, during the grazing season, post grazing season, and at the end of the growing season Red Rock Ranger District/Mogollon Rim Ranger District: • 344,546 acres on 10 active allotments were administered to standard. • Actual use was 71% of the permitted use. • Utilization monitoring and range inspections were conducted on 9 allotments. This includes monitoring and inspections prior to the grazing season, during the grazing season, post grazing season, and at the end of the growing season
Range Improvements				
Condition of Structural Improvements	Meet Federal regulation, and identify those structures which must be reconstructed.	Range inspections, range analysis, permittee reports.	50% of range structures per decade *(national requirement is now once every five years)*	Flagstaff Ranger District: Inventoried and inspected approximately 5% of existing range structural improvement, which included the following inventory and inspection: approximately 23 miles of allotment boundary/pasture fence and 61 water system developments. Red Rock Ranger District/Mogollon Rim Ranger District: Inspected approximately 27 miles of fence, 65 earthen stock tanks, 5 troughs on a water system, and 4 livestock handling facilities.
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 – There are 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 – There are no transitory rangelands.

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Timber Reforestation				
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/Timber Stand Improvement (TSI) Needs Report, plantation survival surveys, **stand certification,** silvicultural prescriptions, post-sale administrative review, Timber Management Information System (TMIS), Stand Database/Acres	Annually (plantation survival surveys are 1st, 3rd & 5th growing seasons) or as scheduled. **Annual stand certification for natural regeneration stands (5th & 10th years).**	First year survival surveys were conducted on 626 acres of reforestation that was planted in 2012 and identified a 66% survival rate. No stand certification for natural regeneration was conducted because no regeneration harvests have been implemented in the last 5 years.
Timber Stand Improvement				
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 Database/Acres	Annually	359 acres of timber stand improvement (TSI) prescriptions accomplished on the Flagstaff Ranger District as planned. 338 acres of TSI accomplished on Mogollon Rim Ranger District as planned. 7,696 acres of 4FRI related TSI accomplished in FY2013. 396 acres of planting accomplished. 61 acres of jackstrawing and site preparation for natural regeneration accomplished. All accomplishments are reported in the FACTS database.

Items Monitored	Intent	Monitoring Method (Unit of Measure)	Measuring Frequency	Fiscal Year 2013 (FY13) Reporting Information
Timber				
Silvicultural Assumptions and Practices	Ensure that: • Appropriate management is applied to Retention and Partial Retention zones and riparian areas, • Rotation age and Culmination of Mean Annual Increment (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, Environmental Assessments (EA), project reviews	Annually	4,250 acres of silviculture prescriptions were prepared (850 acres for the Orion Task Order for 4FRI and 3,400 acres for the Hart Prairie Fuels Reduction and Forest Health Project) on the Flagstaff Ranger District. The Wing Mountain Fuels Reduction and Forest Health Restoration Project were signed on the Flagstaff Ranger District in FY13. No formal project reviews were conducted on Flagstaff Ranger District. 4,100 acres of silviculture prescriptions completed for the Clints Well Forest Restoration Project on Mogollon Rim Ranger District. 71 acres of meadow restoration was started in FY13 with completion expected in 2014 A 77 acre clear cut was created as part of the stream channel restoration for the Schulz Fire post fire flood mitigation work. Subsequent analysis will be needed at a later date to determine reforestation needs for this area.
Timber Assumptions: Volume, Productivity, Condition, Class, Acres Harvested	Ensure the following are correct: • Board foot/cubic foot ratios, • Volume/acre yield, • Condition class assignments, • Schedule of acres harvested	Sale review, EAs, cruise summaries, TMIS, compartment exams, stand data base Use the same conversion ratios as used in Plan calculations/ As appropriate	Annually	All Forest Supervisor authority timber sales were reviewed, and standard Forest Service timber cruising software programs and reporting databases, including TIM and FACTS, were used.
Size of Openings	Ensure that: • Openings comply with size limits and are periodically evaluated for appropriateness	EAs, presale and administrative reviews, and post-sale reviews/ Project area	Annually	Flagstaff Ranger District: All openings created follow prescription guidelines and are verified by GPS or site visits. Openings ranged from 0.1 to 4.0 acres with most being less than 1 acre, except for openings created to address dwarf mistletoe infection, which varied based on the severity of the infection. Mogollon Rim Ranger District: No interspace or regeneration openings were created in 2013 on Mogollon Rim Ranger District. Where prescribed in prescriptions, openings are generally up to 1 acre in size, and never more than 4 acres. Where prescribed openings are >1 acre, 3-5 seed trees are retained. 795 acres of group selection cuts (regeneration openings) were created. These regeneration openings are no larger than 4 acres and will be evaluated for natural regeneration.

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Acres of Overstory and Final Removal Harvests	Meet Federal regulation, measure prescriptions and effects	TMIS, Staff review of 5% of treatment projects **(at least 2 projects)** /Acres	Annually	No overstory removal or final removal harvests were performed on the Forest in 2013
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	No intermediate harvests were performed on the Forest in 2013.
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.**	Program Accounting & Management Attainment Reporting System (PAMARS; an annual reporting system); programmed harvest reports/million board feet (mbf)	Annually	**Offered:** 43,026 mbf/ 93,536 ccf **Sold:** 46,517 mbf/ 101,125 ccf **Harvested:** approximately 4,066 mbf/ 8,839 ccf The target was set at approximately 25,700 mbf and 51,400 ccf. The target was exceeded due to large volumes in 4FRI task orders and the Howard Timber Sale being sold over the counter as it was offered in FY12. These amounts did not exceed the allowable sale quantity.
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	Several free use areas were identified on all ranger districts using slash piles from recent timber sales and recent tornado damage areas for personal use firewood. Approximately 191 cords of commercial firewood were sold in FY2013. Most of the volume was sold as incidental to some other project, such as powerline clearing. **Personal Use Paid:** • 18,040 cords • 9,058 mbf/ 14,198 ccf **Personal Free Use:** • 2,198 cords • 1,104 mbf/ 1,730 ccf No green firewood was made available because there was insufficient capacity on the Forest to establish and administer these areas.

Items Monitored	Intent	Monitoring Method (Unit of Measure)	Measuring Frequency	Fiscal Year 2013 (FY13) Reporting Information
Yield Projections	Ensure that: • Yield projections are correct	Establish Growing Stock Level (GSL) studies in cooperation with Rocky Mountain Forest and Range Experiment Station (RMFRES)/ Permanent plots in regenerated stands/ mbf/acre and/or trees/acre	First decade	Not applicable
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)	Re-evaluation of unsuitable timber lands is done as each large-scale EA is completed. No large scale EA was completed in FY2013. This process, however, has been incorporated as part of the forest plan revision process.

Items Monitored	Intent	Monitoring Method (Unit of Measure)	Measuring Frequency	Fiscal Year 2013 (FY13) Reporting Information
Watershed/Soil/Air				
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 R3 Hydrology Note 14 Photo points, ocular estimates to determine trends/acres. Watershed Condition Framework, FS-977, May, 2011 and Watershed Condition Technical Guide, FS-978, July, 2011.	10% annually	Baseline watershed condition assessments (step A) were completed on all (100%) of the 101 6th HUC watersheds following the Watershed Condition Framework (WCF) process in 2011, so no more are needed at the 6th HUC level. The majority of 6th HUC watersheds (64%) are in Functional at Risk condition followed by Properly Functioning (24%) and Impaired Function (12%). Five watersheds were assessed and re-prioritized for treatment. Implementation and monitoring began in FY 2012 and continued in FY 2013. Barbershop watershed implementation monitoring occurred, and all treatments were successfully implemented with some meadow and wetland restoration completed in 2013. That completed the entire essential project list and moved the entire 6th code watershed to an improved condition (first in R3). Range monitoring (permit/AOI compliance, forage utilization, forage production, condition and trend monitoring) for the grazing year: • Flagstaff Ranger District: 367 person days • Red Rock Ranger District//Mogollon Rim Ranger District: 360 person days
Watershed/ Soils Prescriptions	Monitor projects to determine 1) compliance with recommendations and suitability of recommendations and Best Management Practices (BMPs), and 2) to ensure water quality standards are met.	Review soil disturbing projects for compliance with BMPs and water quality standards.	Minimum of 1 project per District per year	BMPs were identified and implementation monitoring occurred on the following projects: the Greasy Spoon Road decommissioning/relocation project and the Wickiup Watershed Restoration project on the Red Rock Ranger District, Walker Basin and Fossil Creek range EA, road decommissioning, meadow and wetland restoration on Barbershop Canyon watershed on the Mogollon Rim Ranger District, Lake Mary (Elks Park hazardous fuel reduction project on the Flagstaff Ranger District. BMPs were included and National core implementation monitoring occurred in the prescriptions for mechanical thinning and prescribed burning to retain adequate large woody debris, burn under proper moisture conditions and to protect soil organic material in the Rio de Flag watershed and BMPs were monitored for effectiveness on the Greasy Spoon Road decommissioning/relocation project in the Oak Creek watershed.
	Monitor watershed condition in project areas.	Standard watershed condition transects (per Hydro Note 14)/Project	1 Project/year Forest-wide	Soil condition assessments were completed in several pastures and ecological units on the West Windmill allotments to determine existing condition. Soil/watershed condition was monitored on the Fossil Creek allotment to determine hydrologic function and vegetative ground cover.

Items Monitored	Intent	Monitoring Method (Unit of Measure)	Measuring Frequency	Fiscal Year 2013 (FY13) Reporting Information
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	**Fossil Creek Riparian Area Projects:** Forest personnel were on site and monitored to assure treatments were implemented correctly. Operation and cleanout of temporary latrines in highly used recreational sites for reduction of *E.coli* pathogen contamination.
Riparian Areas	Monitor condition and trend of riparian areas photo points.	Standard watershed condition transects, Proper Functioning Condition assessments, ocular, estimates, photo points	5 percent annually	The Spring Institute and a Northern Arizona University graduate student conducted spring inventory (about 25% more forest springs than our Forest inventory had previously identified) in the Rio de Flag, West Clear Creek, and other Forest watersheds using proper functioning condition assessments, chemistry and some flow data on unknown and known (but non GPS located) springs. Riparian utilization was monitored on District allotments where livestock have access to streams, at primarily water gaps, including Oak, Spring, Fossil, East Clear Creek, West Clear, Walker, Wet and Dry Beaver Creeks. Seasonal, monthly or daily stream gauge monitoring continued on Barbershop Canyon, Yeager Canyon and Fossil Creek. The automated stream gauge at Fossil Creek was recently installed to quantify daily and year round flows necessary to validate Wild and Scenic River reserved water rights flow.
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)	0 miles of road were decommissioned forest-wide.

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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 *(minimum)*	**Friends of the Forest Water Quality Monitoring:** Weekly samples using Arizona Department of Environmental Quality's (ADEQ) method were taken year round at six different sites on Oak Creek in high use recreational areas, and these samples are tested for E coli. Exceedences were found near Slide Rock during the high use, monsoon summer season resulting in temporary closure and postings of Slide Rock and Oak Creek swimming. Monitoring results informed forest managers to adjust current recreation use on Oak Creek. **NAU Fossil Creek Fecal Coliform Monitoring:** Under the Middle Fossil Creek water quality improvement grant, Northern Arizona University (NAU) conducted fecal coliform water quality monitoring using the U.S. Environmental Protection Agency (EPA) method in FY 2013 one time/month for 3 months. Results of monitoring can be obtained through contact with NAU and the Red Rock Ranger District. Water quality by stream types monitored by ADEQ can be found at this link http://www.azdeq.gov/environ/water/assessment/assess.html. ADEQ monitors several streams on forest in 3 year cycles.
MINERALS				
Compliance with Terms of Minerals Operating Plans	Meet legislative mandate and Agency guidelines.	Field checks/ Plans	Annually	At least 13 personal use permits or activities were administered in existing pits. 2 operating plans were administered for existing mining claim operations. Continuing to coordinate with local jurisdictions on mineral resources and pits, including preparing for pit expansion associated with the Rock Pit EA for the 4FRI project.
Non-patented Mining Claim Compliance	Minimize illegal mining activity.	Field checks, Bureau of Land Management (BLM) file checks	Annually	There is little mineralization and, therefore, little mineral activity on the Forest. Claims are reviewed when reviewing land adjustment cases only if there is activity observed.
SPECIAL USE PERMITS				
Special Use Permits	Process and administer special use permits in accordance with established guidelines.	Land Uses Report (LUR), field inspections/ Permits	Annually	481 permits were administered to standard in FY13. Administered to standard includes required field inspections. 52 recreation and lands permits were processed in FY13. The forest has approximately 513 permits in the issued status at the end of FY13. Backlog of expired permits is being reduced through use of cost recovery fees.
Land Purchase, Acquisition, and Exchange	Consolidate Forest lands and meet public needs.	Forest Land Adjustment Plan, Management Accomplishment Report (MAR) target/ Cases	Annually	No land adjustment cases were completed in FY13. Work continued on the Camp Verde Education Land Grant Act case for 20 acres of conveyance as well as the Show Low South Land Exchange project.

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Occupancy Trespass	Minimize Forest trespass problems.	Field checks, landline location/ Cases resolved vs. new cases	Annually	3 encroachment cases were resolved including removal of one constructed private property entrance sign, issuing a permit for one unauthorized road, and removal of personal property and trash from forest. On-going coordination on legislation to resolve the Mountainaire Encroachments continued. New cases continue to add to a backlog list of older encroachment cases.
Landline Location	Maintain Forest boundary.	Landline location, MAR target/ Miles	Annually	2.5 miles of boundary line were maintained to standard in FY13 as part of the cooperative private land survey around Fox Ranch. Established an agreement with BLM to assist with boundary work associated with the Flagstaff Water Protection Project and 4FRI.
ROADS				
Arterial/Collector, Construction/ Reconstruction	Ensure compliance with identified needs for arterial/collector reconstruction. Forest Issue related	Work accomplishment reports/Miles	Annually	Improvements to existing ML 3, 4, and 5 roads - 0 miles ML 2 Road Maintenance – 104.6 miles ML 3 Road Maintenance – 341.3 miles Road Decommissioning - 0 miles As per the current Forest Plan, "Roads not needed for effective use and administration of Forest resources are obliterated as funding becomes available…The remainder of the road system will be reconstructed on a rotational cycle based on a needs and benefit/cost analysis. Others are maintained for user safety and resource protection." The Forest has utilized current funding to provide and maintain a serviceable transportation system that meets the needs for public access, land management, resource protection and user safety.
Purchaser Credit Roads	Ensure compliance with identified needs for P/C construction/ reconstruction	Work accomplishment reports/Miles	Annually	None.

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PROTECTION				
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 regional entomologists, compartment exam, project inspections and reviews/Acres, Forest-wide	Annually	The number of acres impacted by bark beetles increased only slightly in 2013 (22,657), compared to 2012 levels (20,026) on the Coconino NF. The notable change is in the forest type affected and the species of bark beetle that are now becoming more active. In 2012, approximately 99 percent of the mapped bark beetle activity occurred in ponderosa pine forests and less than one percent occurred in mixed-conifer or spruce fir forests. This year, around 83 percent of the mapped mortality occurred in the pine type, around 13 percent occurred in the mixed-conifer, and about four percent occurred in spruce fir forests. Bark beetle species that are becoming more active in mixed-conifer forests include mountain pine beetle and the Douglas-fir beetle. Noteworthy levels of mountain pine beetle activity have not occurred on the Coconino NF since 2002 when 128 acres were mapped. Over 500 acres of scattered southwestern white pine mortality were mapped on the San Francisco Peaks this year. Approximately 2,350 acres of Douglas-fir beetle-caused tree mortality were mapped on the Coconino in 2013. Large pockets of Douglas-fir mortality were detected on the San Francisco Peaks near areas impacted by high severity fire. In the spruce fir type, the western balsam bark beetle and spruce beetle are causing corkbark fir and Engelmann spruce mortality on the San Francisco Peaks. This increase in bark beetle activity is associated with the Shultz Fire and disturbance in general including prescribed fire and the tornado events that occurred in 2010. The number of acres impacted by defoliators decreased on the Coconino NF in 2013. The pine sawfly outbreak on the border of the Coconino and Kaibab National Forests continues to be active, however the number of acres affected on the Coconino NF decreased from 2,120 acres detected in 2012 to 184 acres in 2013. The large aspen tortrix, *Choristoneura conflictana,* continues to defoliate approximately 1,400 acres of aspen around the north and west sides of the San Francisco Peaks. Western spruce budworm activity was also documented on the San Francisco Peaks this year; however, it was not detected aerially. Webbing and bud mining were observed on corkbark fir around the parking lot and along the Kachina Trail at Snowbowl in June 2013. We did not map any defoliation of riparian species caused by Leuschner's tussock moth, *Orgyia leuschneri* around Midgley Bridge on the Red Rock Ranger District in 2013. At the end of last year, most egg masses were parasitized or infected with nuclear polyhedrosis virus (NPV) which led to the population crash this year. More information, including the 2012 report on forest insect and disease conditions in the Southwestern Region may be found on the U.S. Forest Service's Southwest Region, Forest Health and Scientific Publications web site at: http://www.Forest Service.usda.gov/detail/r3/maps-pubs/?cid=stelprdb5176419
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 ADEQ. Field monitoring is consistent with guidelines set in Forest Service Manual 5100, Chapter 5140: Prescribed Fire. Daily prescription (Rx) requests are submitted for approval from ADEQ.

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Fuel Treatment Outputs	Ensure balanced fuel treatment outputs, emphasizing utilization.	Accomplishment reports/Acres	Annually	902 acres were treated with pile burns 6,886 acres were broadcast burned within Wildland Urban Interface (WUI). 508 acres were broadcast burned within areas identified as Non-WUI. 613 acres were identified as wildfires having met land management objectives. 4, 995 acres were mechanical integrated treatments FY13 Totals: The Forest's fuel treatment target was 6,000 acres. The COF treated a total of 8,296 acres as core target, and 5,608 acres as integrated target.
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 Management Areas (MA).	Reports/Acres	Annually	A Fires 164 (Class A - one-fourth acre or less) B Fires 57 (Class B - more than one-fourth acre, but less than 10) C Fires 8 (Class C - 10 acres or more, but less than 100 acres) D Fires 1 (Class D - 100 acres or more, but less than 300 acres) E Fires 1 (Class E - 300 acres or more, but less than 1,000 ac) F Fires 0 (Class F - 1,000 acres or more, but less than 5,000 ac) G Fires 0 (Class G - 5,000 acres or more) Total Fires: 231 (83 Human caused, 148 Lightening) Total Acres Burned*: 894 *Note: Wildfire Acre PARs represent old Forest Plan standards/guidelines that are outdated and no longer based upon best available science and national program direction. Only 613 wildfire acres were claimed for meeting land management objectives in FY13.

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Cost of Suppression, Protection, Organization, and Net Value Change	Keep fire management program cost effective.	PAMARS/Dollars	Annually	Suppression costs were minimized as much as possible to meet objectives in maintaining resource effectiveness and safety guidelines during suppression activities. Larger and long duration fires were managed under the Wildland Fire Decision Support System (WFDSS) process where costs were tracked and objectives were created to keep costs commensurate with the Values At Risk. Suppression costs are tracked through the use of wildfire suppression funds; a summary of total suppression costs for 2013 is not currently available. Pre-suppression costs have remained flat or have decreased slightly due to lower budget levels in 2013. NOTE: Net Value Change – represents old forest plan language that is no longer appropriate or easily attainable without extensive resource area analysis stating the net present value of every resource on the Forest. In addition, national policy/direction supports the idea that fire is beneficial on the landscape and that fire does not cause permanent detriment to resources.
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 planning and budgetary allocations are coordinated to provide effective and efficient fire suppression response to wildland fires based on historical data and projected fire danger ratings through the use of hazard analysis procedures. The Forest still continues to maintain a minimum of 98% effective suppression of all unwanted fires within the initial attack period (first 24 hrs.). Line officers review suppression effectiveness through on-site inspection of a minimum of 10% of all fires per fiscal year. Pre-season preparedness reviews are conducted and safety discussions held. After Action Reviews are held after each operational period. 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 Fiscal Year. Spring and Fall fire leadership meetings are conducted to confirm fire program needs to meet operational objectives for fire suppression.

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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 Law Enforcement & Investigations Management Attainment Report System (LEIMARS)	Annually	Law enforcement officers on the Forest respond to Washington Office and Regional priorities in addition to Forest issues. The demand for law enforcement exceeds Forest capacity. Number of contacts and warnings are up from last year due to educating the public on TMR. FY 2013 statistics include: Fines collected: $87,951 Damage to Government property and resources: $4,704 Public contacts: 12,583 Violations issued: 733 Warnings issued: 388 Arrests: 30 Cannabis plants eradicated: 0 Cannabis plots eradicated: 0
GENERAL ADMINISTRATION				
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	Based on quarterly Schedule of Proposed Actions (SOPA) reports from October 2012 – September 2013, public contacts were made with respect to: **Forest-wide and Multi-District** • Four-Forest Restoration Initiative (Kaibab and Coconino) EIS • Glen Canyon to Pinnacle Peak Transmission Line Vegetation Management EA • NPG Cable of Arizona Issuance of 10 Year Permit CE • Forest Plan Revision for the Coconino National Forest EIS • Rock Pit Development: Coconino and Kaibab National Forests EA **Mogollon Rim Ranger District**: • 2013 Mogollon Rim District Permit Reissuances CE • Bill Dick, Foster, and Jones Spring Enhancement Project CE • Clint's Well Forest Restoration Project EA • Mahan-Landmark Forest Restoration Project EIS

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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	**Flagstaff Ranger District:** • Angell Grazing Allotment EA • APS NO1 Youngs to Mormon Lake 69 kV Power Line EA • Brandis Way Road and Channel Widening CE • Dahl FLPMA Forest Roads Special Use Permit CE • Flagstaff Watershed Protection Project EIS • Hitchin Post Stables Special-Use Permit Reauthorization CE • Hunter Access for Aspen Depredation Area CE • Kelly Motorized Trails EA • Pronghorn Fence Modification Project CE • Schultz Sediment Reduction Additions and Wupatki Trails Drainage Channel CE • Turkey Butte/Barney Pasture Forest Health and Fuels Reduction Project EA • Windmill West Range Allotment EA • Wing Mountain Fuels Reduction and Forest Health Restoration EA

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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	**Red Rock Ranger District:** • Apache Maid Rangeland Management Analysis EA • APS Cornville Power Line Rebuild CE • APS VR1 Windmill Ranch 69 kV Line CE • Arizona Water Company Water Storage Tanks EA • Beaver Creek Lagoon Reconstruction CE • Camp Verde Park and Sanitary District Roads CE • Cedar Flat Wildlife Habitat and Watershed Enhancement Project CE • Cornville Non-Motorized Trail System EA • Fossil Creek Rangeland Management EA • Fossil Creek Wild and Scenic River Comprehensive River Management Plan EA • Honanki Improvements CE • Oak Creek Overlook Vending Special Use Reauthorization CE • Oak Creek Water Co Pipeline CE • Outfittter/Guide Permits for Metaphysical Activities CE • Red Rock Ranger District 2013 Permit Reauthorizations • Re-issue Special Use Permit to Central Arizona Modelers CE • Road Closures for Threatened, Endangered and Sensitive Species CE • Road Maintenance CE • Sedona Marathon CE • Sedona Trails – Phase III CE • Sedona Trails Additions – Phase II CE • Sedona-Oak Creek Alternative Transportation Study EA • Signage Improvements CE • Soldiers Pass Motorized Use EA • Stoneman Lake Overlook Site Improvements CE • Tobias/Flynn Road Access EA • Trail Bound Trips CE • Yavapai Apache Sewer and Utility Line Project CE
Heritage Public Enhancement Activities				**Heritage Public Enhancement Activities:** Although Heritage Section activities are mostly oriented on providing cultural resource clearances for projects, the Forest also has a very active professional and public archaeological component. A total of 20 tours, talks, and presentations at local and state-wide events were conducted in FY 2013. These included participation in Arizona Heritage Appreciation Month and the Flagstaff Festival of Science. The Forest co-hosted the Pecos Conference – an annual event held since 1927 where archaeologists throughout the Southwest meet to discuss their field work. About 100 people participated. The Forest also participated in the preparation of an exhibit featuring perishable artifacts, such as textiles and wood artifacts, from the Honanki Save America's Treasures Project. The exhibit is on a long-term loan to the Verde Archaeologist Center.

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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	Due to a change in budgeting process, this can no longer be tracked 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	Effects of adjacent land management on Forest goals and objectives has led to an increased public interest for Forest lands to provide open space around communities, as well as the need for easements on, or land conveyances of, Forest lands for community infrastructure, roads and energy corridors. These topics are incorporated in the ongoing Forest Plan revision process.