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# Monitoring and Evaluation Report

## FY2014

Coconino National Forest

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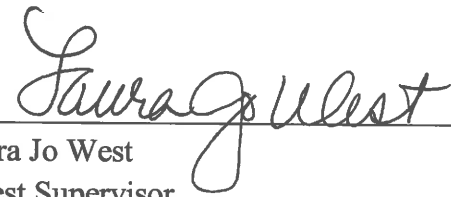
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## Introduction and Forest Supervisor Certification

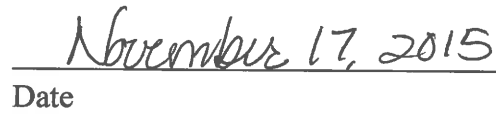
This report provides monitoring information for fiscal year 2014, as required by the Coconino National Forest's amended 1987 Land and Resource Management Plan (Forest Plan). The intent of the monitoring and evaluation report is to inform the decision maker and the public of progress toward achieving 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 2014. 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.



Laura Jo West  
Forest Supervisor



Date

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## Recreation

RECREATION				
Items Monitored	Intent	Monitoring Method (Unit of Measure)	Measuring Frequency	Fiscal Year 2014 (FY14) Reporting Information
<b>Developed Site Use</b>	Determine recreation use and demand.	Recreation Information Management (RIM) system use reports/Recreation Visitor Days (RVD's)	Annually	The RIM system has been replaced by the National Visitor Use Monitoring (NVUM), which provides day, overnight, general forest area, trail and wilderness use based on user surveys at these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 downhill skiing that may reflect somewhat better winter precipitation as well as snowmaking.
<b>Developed Site Condition</b>	Prevent damage and deterioration. Meet health and safety requirements	RIM system facility condition reports, project reviews/facilities by RIM maintenance class	Annually	The 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. Improvements at Yavapai Vista were completed in 2014. 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. Improvements at Faye Canyon were completed in 2015.
<b>Implementation of Recreation Opportunity Spectrum (ROS) Guidelines</b>	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 current condition mapping was updated as part of the ongoing forest plan revision effort. The new current condition mapping is being used in project level evaluations. The forest began implementation of Travel Management in May 2012. Implementation efforts have been focused on patrol, education, signs, and physical closures to protect sensitive areas from unauthorized motor vehicle use. 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 Wilderness Opportunity Spectrum (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).
<b>Motor Vehicle Use</b>	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	<p>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</p> <p>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, 2013, and 2014 to sign as closed and/or block motor vehicle access have proven most effective at discouraging motorized use outside of designated areas.</p> <p>For additional information see the Coconino National Forest Travel Management Monitoring Report:  <a href="http://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprd3829013.pdf">http://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprd3829013.pdf</a></p>

<b>RECREATION</b>				
<b>Items Monitored</b>	<b>Intent</b>	<b>Monitoring Method (Unit of Measure)</b>	<b>Measuring Frequency</b>	<b>Fiscal Year 2014 (FY14) Reporting Information</b>
<b>Dispersed Area Use and Experience Levels</b>	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 by designating additional areas for motorized camping. Public comments received during travel management implementation indicate the public desires additional camping corridors be identified for motorized dispersed camping opportunities.
<b>Dispersed Area Condition</b>	Prevent unacceptable resource damage.	RIM system, project reviews/area condition	Annually	Anecdotal evidence and monitoring suggests travel management compliance is fairly good, although there are still places where motorized cross country travel is causing resource damage. Designated motor vehicle 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.
<b>Trail Condition</b>	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.
<b>Visual Quality Objective (VQO) Compliance</b>	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 has completed Scenery Management System (SMS) mapping in preparation for the ongoing forest plan revision effort. This SMS 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 the Schultz Fire area are being replanted, helping speed recovery of forest settings where the landscape character was impacted by high severity wildfire.



## Wilderness

Wilderness				
Items Monitored	Intent	Monitoring Method (Unit of Measure)	Measuring Frequency	Fiscal Year 2014 (FY14) Reporting Information
<b>Wilderness Use</b>	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. Concluded in 2015 on anniversary of Wilderness ACT. This year all wildernesses met 100% of what was required. New performance measure will be required in 2016.
<b>Wilderness Condition</b>	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 were replaced with updated inventory protocols for the 10 elements of the 10 Year Wilderness Stewardship Challenge, which concluded in 2015 and will be replaced in 2016. 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.

## Cultural Resources

CULTURAL RESOURCES				
Items Monitored	Intent	Monitoring Method (Unit of Measure)	Measuring Frequency	Fiscal Year 2014 (FY14) Reporting Information
<b>Cultural Resource Compliance Project</b>	Meet Federal regulation; ensure project compliance with guidelines.	Approved cultural resource clearance for each ground-disturbing activity.	Annually	<p><b>Projects Surveyed, Sites Recorded, and Clearances Issued:</b> Approximately 57 ground disturbing (96,537 acres) and 40 (65 acres) non-ground disturbing projects received cultural resources review and clearance. These efforts resulted in approximately 65 sites being recorded and 4,571 acres being surveyed. In the course of doing surveys, another 617 acres were re-examined, finding no new sites and confirming the Forest's continued reliance on the results of previous Forest surveys. 87 sites were determined eligible and 20 sites were determined not eligible for the National Register of Historic Places.</p> <p><b>Native American Graves Protection and Repatriation Act (NAGPRA)</b> In FY2014, the Forest conducted its fifth year of repatriating prehistoric burials and burial-related artifacts, in compliance with the Native American Graves Protection Act. Two reburials were conducted – one to complete the repatriation of human remains and artifacts from the Flagstaff area (approximately 34 individuals and 268 artifacts), and a final reburial for the remains and artifacts from Chavez Pass (remains of 286-686 individuals and about 700 artifacts).</p> <p><b>Non-Project Site Inventories (NHPA Section 110)</b> Six non-project archaeological survey projects were conducted on the Forest in FY2014 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. 80 new sites were recorded by these projects, of which 24 were determined eligible for the National Register. The value of this volunteer work is estimated at \$102,164.</p>

<b>CULTURAL RESOURCES</b>				
<b>Items Monitored</b>	<b>Intent</b>	<b>Monitoring Method (Unit of Measure)</b>	<b>Measuring Frequency</b>	<b>Fiscal Year 2014 (FY14) Reporting Information</b>
<b>Cultural Resource Property Protection</b>	Protect significant properties.	Patrol areas in conjunction with other duties/Site condition	Annually	<p><b>Arizona Site Stewards Program:</b> 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. 43 sites were monitored by site stewards in FY2014. Nine of these sites are listed on the National Register of Historic Places. Three of these sites were found to be vandalized by graffiti. None of the vandalized sites are on the National Register of Historic Places. The value of this volunteer work is valued at \$9,021.</p> <p><b>National Historic Preservation Act, Sec. 106 Monitoring:</b> 77 archaeological sites were monitored as part of compliance work on 11 projects. No sites were found damaged by project-related activities.</p> <p><b>National Historic Preservation Act, Sec. 110 Monitoring:</b> Five sites listed on the National Register and 19 Priority Heritage Asset Sites were monitored by Forest archaeologists. 42 other sites that were not Priority Heritage Assets were also monitored.</p> <p><b>Elden Pueblo Maintenance:</b> Volunteers donated 47 days to stabilization and site maintenance at Elden Pueblo and to installing a fence around the Astronaut Training Ground. The value of this volunteer work is valued at \$8,500.</p> <p><b>Collections Curation:</b> Volunteers continued the analysis and cataloguing artifacts from the Forest, contributing 166 days valued at \$29,800. Another 38 days were donated, with a value of \$6,950, working on the on-going project of cataloguing the Heritage Program's 67,000 photographs and 14,000 slides.</p>
<b>Heritage Site Enhancement and Public Outreach</b>	Provide recreational and educational information to public to meet NHPA Section 110 requirement.	No. of events: 68	Annually	<p><b>Archaeology and Heritage Appreciation Month:</b> As part of this annual event, sponsored by the Arizona State Historic Preservation Office, the Forest hosted V-V Days in partnership with the Arizona Archaeological Society and the Friends of the Forest. The Forest Archaeologist also prepared and staffed an exhibit for the Verde Days Archaeology Fair and gave a presentation to celebrate the 200<sup>th</sup> anniversary of the Star Spangled Banner.</p> <p><b>Flagstaff Festival of Science:</b> The Forest has participated in the festival since it began, 25 years ago. This year, the Forest Archaeologist gave a talk at Riordan State Park. The Elden Pueblo Project staffed a booth at the Festival in the Park and hosted an Elden Pueblo Public Day.</p> <p><b>Elden Pueblo:</b> The Elden Pueblo Project conducted 30 school programs, three weeks of summer camp activities for the Museum of Northern Arizona, five public days, a Scout program. The Elden Pueblo Project also conducted workshops in rock art recording, site assessments, and ceramic analysis. In total, 1,653 children and 1,029 adults were served by the Elden Pueblo Project. A total of 202 days were volunteered to conduct these programs. This work is valued at \$36,315. Approximately 2,500 walk-in visitors also toured the site.</p> <p><b>Astronaut Training Ground:</b> Interpretive signs were installed around the Astronaut Training ground.</p> <p><b>Publications:</b> Heritage resources of the Coconino were featured in two <i>Arizona Highways</i> articles and three articles in <i>Southwest Archaeology</i>.</p> <p><b>Tours and Lectures:</b> Ten site tours and 16 lectures were given by the Forest Archaeologist.</p>

## Wildlife

WILDLIFE				
Northern goshawk ( <i>Accipiter gentilis</i> ), Pygmy nuthatch ( <i>Sitta pygmaea</i> ), and Mexican spotted owl (MSO) ( <i>Strix occidentalis lucida</i> )				
Items Monitored	Intent	Monitoring Method (Unit of Measure)	Measuring Frequency	Fiscal Year 2014 (FY14) Reporting Information
<b>Amount of Mature and Old-Growth Habitat</b>	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	<p><b>Amount of Mature and Old Growth Habitat:</b></p> <p><b>Ponderosa Pine:</b> 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.</p> <p><b>Mixed Conifer and Spruce-fir:</b> FIA data (2001-2005) indicate that approximately 7,750 acres (7.7%) of these forest types are in late seral stages.</p>
	Maintain habitat capability	Habitat capability model/percent habitat capability	Annually	<p><b>Northern goshawk and Pygmy nuthatch:</b> 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. 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. Although the age class distribution is shifting slightly, the proportion of the forest in uneven-aged conditions has stayed about the same.</p> <p><b>Mexican spotted owl:</b> 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 Ecological Response Unit (ERU); 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.</p>

WILDLIFE				
Turkey ( <i>Meleagris gallopavo merriami</i> )				
Items Monitored	Intent	Monitoring Method (Unit of Measure)	Measuring Frequency	Fiscal Year 2014 (FY14) Reporting Information
<b>Habitat Capability</b>	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.
<b>Population Trend</b>	Meet population goal	Arizona Game and Fish Department (AZGFD) surveys/habitat capability modeling	Annually	<p>Because estimating actual population size is difficult, the Arizona Game and Fish Department (AGFD) has been using the percent of archery hunters seeing turkeys during archery elk hunts, and the number of turkeys harvested during the spring to estimate population trends. Data on percent of 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.</p> <p>No additional information available for FY2014.</p>
<b>Nesting Habitat</b>	Maintain nesting habitat	On-the-ground evaluation	Annually and 5 year trend review	No information available for FY2014.

<b>WILDLIFE</b>				
<b>Red Squirrel (<i>Tamiasciurus hudsonicus</i>)</b>				
<b>Items Monitored</b>	<b>Intent</b>	<b>Monitoring Method (Unit of Measure)</b>	<b>Measuring Frequency</b>	<b>Fiscal Year 2014 (FY14) Reporting Information</b>
<b>Habitat Capability</b>	Maintain habitat capability	Habitat capability model/habitat capability	Annually on 90% of affected projects	<p>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.</p> <p>The Rocky Mountain Bird Observatory (now, Bird Conservancy of the Rockies (BCOR)) conducted breeding bird surveys in 65 sampling units in 2014 and collected habitat data along transects. Those data have not been analyzed yet. 32 red squirrels were detected.</p>

<b>WILDLIFE</b>				
<b>Elk (<i>Cervus Canadensis</i>) and Mule Deer (<i>Odocoileus hemionus</i>)</b>				
<b>Items Monitored</b>	<b>Intent</b>	<b>Monitoring Method (Unit of Measure)</b>	<b>Measuring Frequency</b>	<b>Fiscal Year 2014 (FY14) Reporting Information</b>
<b>Habitat Capability</b>	Maintain habitat capability	Habitat capability model/habitat capability	Annually	<p><b>Elk:</b> No information available for FY2014.</p> <p><b>Mule deer:</b> No information available for FY2014.</p>
<b>Population Trends and Distribution</b>	Meet population goal	AZGFD surveys/habitat capability model	Annually	<p><b>Elk:</b> AGFD uses a combination of annual survey data and population estimates derived from computer simulation modeling 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. 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.</p> <p>AGFD surveyed for elk in 2014. Elk populations are largely determined by the number of fawns that survive their first year. In most Game Management Units, the number of fawns/100 cows stayed the same or increased over the previous 4-year average; the exception was GMU 7W, where the number dropped below the previous 4-year average (Hunt Arizona 2015).</p> <p><b>Mule Deer:</b> 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.</p> <p>AGFD surveyed for mule deer in 2014. Mule deer population levels are largely determined by the number of fawns that survive their first year. In most Game Management Units on the Forest, the number of fawns/100 does were near or</p>

<b>WILDLIFE</b>				
<b>Elk (<i>Cervus Canadensis</i>) and Mule Deer (<i>Odocoileus hemionus</i>)</b>				
<b>Items Monitored</b>	<b>Intent</b>	<b>Monitoring Method (Unit of Measure)</b>	<b>Measuring Frequency</b>	<b>Fiscal Year 2014 (FY14) Reporting Information</b>
				above average for the previous 4 years; the exception was GMU 7, which was well below numbers in the previous 4 years (Hunt Arizona 2015).

<b>WILDLIFE</b>				
<b>Abert's Squirrel (<i>Sciurus aberti aberti</i>)</b>				
<b>Items Monitored</b>	<b>Intent</b>	<b>Monitoring Method (Unit of Measure)</b>	<b>Measuring Frequency</b>	<b>Fiscal Year 2014 (FY14) Reporting Information</b>
<b>Habitat Capability</b>	Maintain habitat capability	Habitat capability model/habitat capability	Annually	<p>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.</p> <p>The Rocky Mountain Bird Observatory (now, Bird Conservancy of the Rockies (BCOR)) conducted breeding bird surveys in 65 sampling units in 2014 and collected habitat data along transects. Those data have not been analyzed yet. 24 Abert's squirrels were detected.</p>

<b>WILDLIFE</b>				
<b>Hairy woodpecker (<i>Picoides villosus</i>), Pygmy nuthatch (<i>Sitta pygmaea</i>) &amp; Red-naped sapsucker (formerly known as Yellow-bellied sapsucker) (<i>Sphyrapicus nuchalis</i>)</b>				
<b>Items Monitored</b>	<b>Intent</b>	<b>Monitoring Method (Unit of Measure)</b>	<b>Measuring Frequency</b>	<b>Fiscal Year 2014 (FY14) Reporting Information</b>

<b>WILDLIFE</b>				
<b>Hairy woodpecker (<i>Picoides villosus</i>), Pygmy nuthatch (<i>Sitta pygmaea</i>) &amp; Red-naped sapsucker (formerly known as Yellow-bellied sapsucker) (<i>Sphyrapicus nuchalis</i>)</b>				
<b>Items Monitored</b>	<b>Intent</b>	<b>Monitoring Method (Unit of Measure)</b>	<b>Measuring Frequency</b>	<b>Fiscal Year 2014 (FY14) Reporting Information</b>
<b>Snag Densities, Sizes, and Species (Existing and Future)</b>	Maintain habitat capability	Compartment exams, snag inventories, project reconnaissance and habitat capability modeling/acres	Annually	The Rocky Mountain Bird Observatory (now, Bird Conservancy of the Rockies (BCOR)) conducted breeding bird surveys in 65 sampling units in 2014 and collected habitat data along transects. Those data have not been analyzed yet. 87 hairy woodpeckers and 254 pygmy nuthatches were detected. No red-naped sapsuckers were detected. Data are sufficient to make robust occupancy and density estimates for the Forest. The current estimates for the hairy woodpecker are 2.2 birds/sq. mi., with an overall population estimate of 41,764. The current estimates for the pygmy nuthatch are 8.0 birds/sq. mi., with an overall population estimate of 154,541.

<b>WILDLIFE</b>				
<b>Plain (Juniper) Titmouse (<i>Baeolophus ridgwayi</i>)</b>				
<b>Items Monitored</b>	<b>Intent</b>	<b>Monitoring Method (Unit of Measure)</b>	<b>Measuring Frequency</b>	<b>Fiscal Year 2014 (FY14) Reporting Information</b>
<b>Amount of Mature and Old-Growth, Pinyon-Juniper</b>	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.  The Rocky Mountain Bird Observatory (now, Bird Conservancy of the Rockies (BCOR)) conducted breeding bird surveys in 65 sampling units in 2014 and collected habitat data along transects. Those data have not been analyzed yet. There were 207 juniper titmouse detections. Data are sufficient to make robust occupancy and density estimates for the Forest. The current estimates for the juniper titmouse are 5.1 birds/sq. mi., with an overall population estimate of 98,934.
<b>Snag Densities and Sizes of Pinyon-Juniper</b>	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.  No information available for FY2014.

<b>WILDLIFE</b>				
<b>Pronghorn antelope (<i>Antilocapra americana</i>)</b>				
<b>Items Monitored</b>	<b>Intent</b>	<b>Monitoring Method (Unit of Measure)</b>	<b>Measuring Frequency</b>	<b>Fiscal Year 2014 (FY14) Reporting Information</b>
<b>Forage Availability</b>	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 Final EIS for Forest Plan Revision on vegetation (ERUs) and soils, and 2) Range Allotment Analysis and the associated environmental analysis 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.

WILDLIFE				
Pronghorn antelope ( <i>Antilocapra americana</i> )				
Items Monitored	Intent	Monitoring Method (Unit of Measure)	Measuring Frequency	Fiscal Year 2014 (FY14) Reporting Information
Population Trends	Meet population goal	AZFGD surveys/ Numbers	Annually	<p>AGFD evaluates trends in pronghorn populations based on annual surveys and model-derived population estimates. The two best indicators for pronghorn population trend are the number of pronghorn observed and the number of fawns per 100 does observed. These indicators come from the annual surveys. 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.</p> <p>AGFD surveyed for pronghorn in 2014. Pronghorn population levels are largely determined by the number of fawns that survive their first year. In 2 of 5 Game Management Units on the Forest, the number of fawns/100 does were near the previous 4-year average, 1 was well above average, and 2 were well below (Hunt Arizona 2015).</p>

WILDLIFE				
Cinnamon teal ( <i>Anas cyanoptera</i> )				
Items Monitored	Intent	Monitoring Method (Unit of Measure)	Measuring Frequency	Fiscal Year 2014 (FY14) Reporting Information
Amount of Suitable Nesting Habitat	Maintain habitat capability	Field surveys (height density method) or score cards/acres)	Every 5 years on selected wetlands	No information available for FY2014.
Nesting Success	Maintain habitat capability	Systematic field sampling, cooperative survey with AZGFD/numbers	Every 5 years on selected wetlands	None completed in 2014.

WILDLIFE				
Riparian Areas, Lincoln's Sparrow ( <i>Melospiza lincolni</i> ), Lucy's Warbler( <i>Vermivora luciae</i> ), & Yellow-Breasted Chat( <i>Icteria virens</i> )				
Items Monitored	Intent	Monitoring Method (Unit of Measure)	Measuring Frequency	Fiscal Year 2014 (FY14) Reporting Information
Habitat Condition	Maintain habitat capability	Habitat capability modeling and systematic field sampling using riparian scorecard analyses/acres	5% of stream miles annually	No information available for FY2014.

WILDLIFE				
Aquatic-Macro Invertebrates				
Items Monitored	Intent	Monitoring Method (Unit of Measure)	Measuring Frequency	Fiscal Year 2014 (FY14) Reporting Information
Species Diversity and Biomass	Maintain aquatic habitat effectiveness	Systematic field sampling (modified surber sampling)	Every 5 years on selected streams	<p>The Forest-wide trend for macroinvertebrates is stable.</p> <p><u>Red Rock Ranger District</u> No new data was collected in FY2014.</p>

**WILDLIFE**

Threatened And Endangered Species				
Items Monitored	Intent	Monitoring Method (Unit of Measure)	Measuring Frequency	Fiscal Year 2014 (FY14) Reporting Information
Habitat	Meet Federal regulation	Field surveys/ Acres	Annually	
				<p><b>Mexican Spotted Owl (MSO)</b> No information available for FY2014.</p>
				<p><b>Chiricahua Leopard Frogs (CLF) (<i>Rana hiricahuensis</i>)</b> No information available for FY2014.</p>
				<p><b>Yellow-billed Cuckoo (<i>Coccyzus americanus occidentalis</i>)</b> No information available for FY2014.</p>
				<p><b>Listed Fish: Gila Topminnow (<i>Poeciliopsis occidentalis occidentalis</i>), Spikedace (<i>Meda fulgida</i>), and Loach Minnow (<i>Tiaroga cobitis</i>)</b> Arizona Game and Fish and Forest Service biologists made several visits to both Holly Springs and Sheepshead Springs. Gila topminnow was reintroduced to Sheepshead Springs in September 2014. One month after reintroduction, water quality was monitored, and appeared suitable for establishment of the species. Several topminnow were observed at stocking locations, but it is too soon to know if the species will become established.</p> <p>Arizona Game and Fish, Forest Service, and Bureau of Reclamation biologists made several visits to Spring Creek to determine potential barrier locations. Barrier location was established, and an Environmental Assessment (EA) was completed by Bureau of Reclamation. If no objections are recorded, construction of the barrier should begin in early 2015. This barrier could potentially allow both Spikedace and Loach Minnow, as well as Gila Topminnow, to be reintroduced to Sheepshead Spring. The barrier would also protect endangered Gila Chub in the upstream perennial reach.</p>
				<p><b>Little Colorado Spinedace (<i>Lepidomeda vittata</i>)</b> No surveys for Little Colorado Spinedace were conducted by AZGFD or USFS in 2014.</p>
				<p><b>Fossil Creek Fish</b> The following are summaries of AGFD's monitoring at Fossil Creek conducted the weeks of July 20<sup>th</sup> and 28<sup>th</sup>, 2014. 102 independent snorkel surveys were performed for a total of 2,550 meters snorkeled (1,250 meters from perm barrier to Sally May and 1,300m for High Falls to Springs). 5 spikedace were detected in the High Falls to Fossil Springs Dam, all of which were larger than 40mm. The lowermost spikedace was found 100 meters upstream of High Falls, with the remainder found 1.9km downstream and 1km downstream of Fossil Springs Dam. Additionally, one snorkeler observed two loach minnow approximately 1km downstream of Fossil Springs Dam. However, a second observer was not able to confirm the observation.</p> <p>Surveys were conducted from the permanent barrier to Sally May Wash. 39 spikedace (greater than 40mm) and 8 spikedace (less than 40mm) were detected. The spikedace were found in the vicinity of the 2012 stocking location and as far down as 2.6 km from the 2012 stocking location. Additionally, adult and juvenile topminnow were detected almost all the way down to the barrier and longfin dace were noted between Mazatzal and Purple Mountain access points.</p> <p>Loach minnow were not observed or detected upstream of Fossil Creek Dam.</p>



<b>WILDLIFE</b>				
<b>Threatened And Endangered Species</b>				
<b>Items Monitored</b>	<b>Intent</b>	<b>Monitoring Method (Unit of Measure)</b>	<b>Measuring Frequency</b>	<b>Fiscal Year 2014 (FY14) Reporting Information</b>
<b>Habitat</b>	Meet Federal regulation	Field surveys/ Acres	Annually	
				<p><b>Spring Creek Fish</b>                      The following is a summary of AGFD’s monitoring at Spring Creek (one of three locations on the Coconino National Forest that the endangered Gila Chub occupies) conducted the week of June 20<sup>th</sup>, 2014. Sampling was performed upstream and downstream of Willow Point Road using baited collapsible mini hoop nets. Green sunfish were not detected on Forest or private land. Sampling was also performed using baited collapsible mini hoop nets set upstream of the diversion and downstream of the lowermost private land. Additionally, single pass electrofishing upstream of Willow Point Road crossing was performed. 6 green sunfish were captured in the first pool immediately upstream of the diversion and then an additional sunfish was captured approximately 800 meters upstream of the diversion. Baited collapsible mini hoop nets were subsequently set in this upstream location did not capture any additional green sunfish. The sunfish that were captured were examined and did not appear to have mature eggs.</p>
				<p><b>West Clear Creek Fish</b></p> <p><b>West Clear Creek – middle (accessed via trail at end of FR142 J; aka Cash Tank trail)</b>                      West Clear Creek at the middle reach was accessed via a trail at the end of FR 142 J (in the vicinity of Cash Tank). The trail descends steeply into the canyon roughly 680 ft. Juvenile roundtail chub (<i>Gila robusta</i>) (candidate for Federal listing) were observed in the pool immediately below where the trail enters onto West Clear Creek, along with speckled dace (<i>Rhinichthys osculus</i>) and desert sucker (<i>Pantosteus clarki</i>). A visual examination of habitats up and downstream revealed chub present throughout, so a 100m survey reach was established from near the point where the trail accesses the stream to 100m upstream. Hoop nets were set to fish the reach and limited angling was also used to capture chub. Baited traps appeared to be much more attractive to crayfish than to chub in the stream, and only 22 chub were captured in the 100m reach, so the effort was extended upstream. Due to the number of chub observed in a large pool 78m above the upper boundary of the 100m quantitative reach, additional traps were fished there, resulting in the capture of just one additional chub; again, traps were swarmed by crayfish. Participants also spent various times angling, resulting in the capture of an additional 3 fish, bringing the total number of chub sampled to 26 chub. There were also numerous chub (adults and juveniles) observed within, above and below the sample reach. It appears that chub continue to do well in this reach of stream, in spite of the presence of crayfish. Fish species sampled within the reach included roundtail chub, speckled dace, desert sucker, and rainbow trout (<i>Oncorhynchus mykiss</i>).</p> <p><b>West Clear Creek - upper (accessed via trail at end of FR142 F).</b>                      West Clear Creek at the upper reach was accessed via the canyon at the end of FR 142 F. Chub were observed roughly 100m downstream from this access point, and a 100m survey reach was established at roughly 200m below the trail. An experimental gill net (“green meanie”), hoop nets, and minnow traps were set; time was also spent fishing with hook and line. The target species (roundtail chub) were observed in pools and riffles both upstream and downstream of the 100m reach. Only eleven chub were caught in the 100m reach, so it was not considered a fixed station, and efforts were expanded through roughly 600m up- and downstream to encompass the best available habitats.</p> <p>The additional efforts throughout the 600m included hoop nets, minnow traps and angling, resulting in the capture of an additional 39 chub. Other species captured were speckled dace, desert sucker, rainbow trout, brown trout (<i>Salmo trutta</i>) and fathead minnow (<i>Pimephales promelas</i>). It appears that chub continue to do well in this reach of West Clear Creek.</p>

WILDLIFE				
Threatened And Endangered Species				
Items Monitored	Intent	Monitoring Method (Unit of Measure)	Measuring Frequency	Fiscal Year 2014 (FY14) Reporting Information
Habitat	Meet Federal regulation	Field surveys/ Acres	Annually	
				<p><b>Arizona cliffrose (<i>Purshia subintegra</i>)</b>                      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 (<i>Salvia dorrii</i> ssp. <i>mearnsii</i>), heath-leaf wild buckwheat (<i>Eriogonum ericifolium</i> var. <i>ericifolium</i>), Ripley's wild buckwheat (<i>Eriogonum ripleyi</i>) and Rusby milkwort (<i>Polygala rusbyi</i>). Data were used in the document below.</p> <p>The Arboretum completed a Habitat Management Plan for the Verde Valley Botanical Area and surrounding area in December 2014. The document was the product of a Challenge Cost Share Agreement between The Arboretum and Coconino National Forest and was a revision of an earlier draft document. The information will be useful for informing Forest Plan Revision analyses and for tracking the status of Arizona cliffrose within the Cottonwood Recovery Unit.</p>
				<p><b>San Francisco Peaks Ragwort (<i>Packera franciscana</i>)</b>                      No actions relating to San Francisco Peaks Ragwort habitat in 2014.</p>
				<p><b>Verde Valley Plant T&amp;E</b>                      The Plant Atlas Project (PAPAZ), a volunteer project to conduct floristic surveys in sensitive areas of the forest has been completed. One area is the Verde Valley Botanical Area, which focuses on Arizona cliffrose and associated Region 3 sensitive species; Verde Valley sage (<i>Salvia dorrii</i> ssp. <i>mearnsii</i>), heath-leaf wild buckwheat (<i>Eriogonum ericifolium</i> var. <i>ericifolium</i>), Ripley's wild buckwheat (<i>Eriogonum ripleyi</i>) and Rusby milkwort (<i>Polygala rusbyi</i>). Volunteers contributed hundreds of hours on this project, which made substantial contributions to the knowledge of the local flora in the area.</p>

WILDLIFE				
Threatened And Endangered Species				
Items Monitored	Intent	Monitoring Method (Unit of Measure)	Measuring Frequency	Fiscal Year 2014 (FY14) Reporting Information
Population	Meet recovery plan goals	Field surveys, US Fish and Wildlife Service surveys/numbers	Annually	
				<p><b>Mexican Spotted Owl:</b>                      Total number of Protected Activity Centers (PACs) on the Forest = 188 (Total number with Coconino NF PAC numbers; includes those shared with other landowners.)                      Number of PACs Monitored = 31                      Number of PACs Known Occupied = 28                      Percentage of PACs Monitored Occupied = 90                      Number of PACs w/ Pairs = 25                      Number of PACs w/ Known Young = 9                      Number of New PACs = 1 (Howard Draw, Flagstaff Ranger District).</p>

<b>WILDLIFE</b>				
<b>Threatened And Endangered Species</b>				
<b>Items Monitored</b>	<b>Intent</b>	<b>Monitoring Method (Unit of Measure)</b>	<b>Measuring Frequency</b>	<b>Fiscal Year 2014 (FY14) Reporting Information</b>
<b>Population</b>	Meet recovery plan goals	Field surveys, US Fish and Wildlife Service surveys/numbers	Annually	<p><b>Chiricahua Leopard Frog:</b>  <u>Mogollon Rim Ranger District:</u> A total of 34 sites were surveyed for leopard frogs. No Chiricahua leopard frogs were detected, but northern leopard frogs were detected at 15 of the sites surveyed.</p> <p><u>Red Rock Ranger District:</u> Two certified seasonal employees conducted surveys for Chiricahua leopard frogs and other herpetofauna at 33 sites on the Coconino National Forest in 2014. Of these 33 sites, only two were occupied; Tin Can and Herbies tank.</p> <p><b>San Francisco Peaks Ragwort:</b>                      No actions relating to San Francisco Peaks Ragwort habitat in 2014.</p> <p><b>Little Colorado Spinedace:</b>                      No information available for FY2014.</p> <p><b>Gila Topminnow</b>                      On October 23, 2014, FS biologist Janie Agyagos, and two Arizona Game and Fish Department (AZGFD) fisheries biologists, Frank Agyagos and Sarah Taylor from Bubbling Ponds, conducted a visual (no dipnet, seining, electroshocking) inspection of Gila Topminnow that had been stocked one month prior into 2 locations in Sheepshead Canyon. Water quality measurements were taken at each stocking location as well. Only one Gila topminnow was observed in the top pool. 10 Gila topminnow were observed in the lower stocking site with an additional 12 Gila topminnow observed in a pool just below that. Survey results were submitted to Tony Robinson, AZGFD on November 4, 2014.</p>

<b>WILDLIFE</b>				
<b>Sensitive Species</b>				
<b>Items Monitored</b>	<b>Intent</b>	<b>Monitoring Method (Unit of Measure)</b>	<b>Measuring Frequency</b>	<b>Fiscal Year 2014 (FY14) Reporting Information</b>
<b>Amount of Suitable Habitat and Population Trends</b>	Manage at appropriate levels to prevent listing as threatened or endangered species	Field surveys/ Acres	5 years	
				<p><b>Bald eagle (<i>Haliaeetus leucocephalus</i>)</b>                      Wintering: Sixteen routes were surveyed during the annual Bald Eagle Midwinter Survey. Forty-two bald eagles and 1 unidentified eagle were counted.</p> <p>Nesting: All or a portion of 7 Breeding Areas occur on the Forest. Arizona Game and Fish Department 2014 survey results were:                      - Beaver: 1 Young Fledged                      - Coldwater: Unoccupied                      - Ladders: Nest failed                      - Lower Lake Mary: 1 Young Fledged                      - Oak Creek: 2 Young Fledged                      - Tapco: Nest Failed                      - Tower: Unoccupied</p>
				<p><b>Southwestern Willow Flycatcher (<i>Empidonax extimus traillii</i>)</b></p> <p>No information available for FY2014.</p>
				<p><b>Bebb's willow (<i>Salix bebbiana</i>) and Blumer's dock (<i>Rumex orthoneurus</i>)</b></p> <p>No information available for FY2014.</p>
				<p><b>Arizona bugbane (<i>Actaea arizonica</i>)</b>                      Three Arizona bugbane sites were monitored. The plants were in good condition with no impacts observed. The Slide Fire in the West Fork of Oak Creek affected numerous occurrences of Arizona bugbane. Six visits were made to various areas to assess the fire effects. Plants were present on most sites within a few months after the fire but significant alteration of the habitat was observed. Long-term monitoring is needed to determine the response/recovery of Arizona bugbane and its habitat. 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.</p> <p>The Slide Fire in the West Fork of Oak Creek affected numerous occurrences of Arizona bugbane. Six visits were made to various areas to assess the fire effects. Plants were present on most sites within a few months after the fire but significant alteration of the habitat was observed. Long-term monitoring is needed to determine the response/recovery of Arizona bugbane and its habitat.</p> <p>Location data for Arizona bugbane were entered into several databases (NRIS/TESP/Invasives) or edited to reflect the past visits and revisits to various occurrences.</p> <p><u>Red Rock Ranger District</u>: Northern Arizona University student Wendy McBride is working on a Flora of West Clear Creek and reported finding 3 new locations of Arizona bugbane that were not previously known.</p>

<b>WILDLIFE</b>				
<b>Sensitive Species</b>				
<b>Items Monitored</b>	<b>Intent</b>	<b>Monitoring Method (Unit of Measure)</b>	<b>Measuring Frequency</b>	<b>Fiscal Year 2014 (FY14) Reporting Information</b>
<b>Amount of Suitable Habitat and Population Trends</b>	Manage at appropriate levels to prevent listing as threatened or endangered species	Field surveys/ Acres	5 years	
				<p><b>Northern Goshawk</b> No information available for FY2014.</p>
				<p><b>Lowland leopard frog (<i>Rana yavapaiensis</i>)</b> No information available for FY2014.</p>
				<p><b>Northern Leopard Frog</b> No information available for FY2014.</p>
				<p><b>Rare Invertebrates</b> No information available for FY2014.</p>
				<p><b>Mexican Garter Snake (<i>Thamnophis eques</i>)</b> No information available for FY2014.</p>
				<p><b>Narrow-headed Garter Snake (<i>Thamnophis rufipunctatus</i>)</b> No information available for FY2014.</p>
				<p><b>Bats</b> No information available for FY2014.</p>
				<p><b>Peregrine Falcon (<i>Falco peregrinus</i>)</b> No information available for FY2014.</p>

<b>WILDLIFE</b>				
<b>Items Monitored</b>	<b>Intent</b>	<b>Monitoring Method (Unit of Measure)</b>	<b>Measuring Frequency</b>	<b>Fiscal Year 2014 (FY14) Reporting Information</b>
<b>Diversity - Successional Stages of Major Vegetation Types</b>	Meet Federal regulation (National Forest Management Act (NFMA))	Compartment exams, field surveys, timber inventory, habitat diversity model/acres	Every 5 years	<p>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.</p> <p><u>Flagstaff Ranger District</u>: No Stand exams were conducted in 2014. Aspen monitoring plots were remeasured on approximately 87 permanent plots.</p> <p><u>Mogollon Rim Ranger District</u>: LIDAR (LIght Detection And Ranging) imaging was acquired on 368,610 acres of the District. 288 stand exams (1,672 plots) were conducted to calibrate the LIDAR data. All stand exams were completed with satisfactory results meeting the requirements in the stand exam contract/handbook.</p>
<b>Habitat Improvements - (Condition of Structural Improvements)</b>	Identify those structures which must be reconstructed	Inspections/ structure	50% of structures per decade	No information available for FY2014.
<b>Stream temperature of cold water fisheries</b>	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 several tidbit thermometers are available on the forest and 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 FY15 and FY16, the forest plans to install several stream temperature tidbit gauges and plan to place them in ADEQ identified cold water fishery streams FY15.

**Range O & M**

<b>Range O&amp;M</b>				
<b>Items Monitored</b>	<b>Intent</b>	<b>Monitoring Method (Unit of Measure)</b>	<b>Measuring Frequency</b>	<b>Fiscal Year 2014 (FY14) Reporting Information</b>
<b>Permitted Use</b>	Meet Federal regulation, check for term grazing permit and Plan compliance.	Annual Grazing Statistical Report/ Animal Unit Months (AUMs) Forest-wide	Annually	No information available for FY2014.

Range O&M				
Items Monitored	Intent	Monitoring Method (Unit of Measure)	Measuring Frequency	Fiscal Year 2014 (FY14) Reporting Information
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	No information available for FY2014.
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 information available for FY2014.
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	No information available for FY2014.
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	No information available for FY2014.

### Range Improvements

Range Improvements				
Items Monitored	Intent	Monitoring Method (Unit of Measure)	Measuring Frequency	Fiscal Year 2014 (FY14) Reporting Information
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 ( <i>national requirement is now once every five years</i> )	No information available for FY2014.
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.

Range Improvements				
Items Monitored	Intent	Monitoring Method (Unit of Measure)	Measuring Frequency	Fiscal Year 2014 (FY14) Reporting Information
<b>Forage Condition in Transitory Range</b>	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.

### Timber Reforestation

Timber Reforestation				
Items Monitored	Intent	Monitoring Method (Unit of Measure)	Measuring Frequency	Fiscal Year 2014 (FY14) Reporting Information
<b>Practices and Assumptions</b>	Ensure that: <ul style="list-style-type: none"> <li>• Regeneration is obtained within 5 years after final harvest cut and scheduled planting is accomplished <b>or prior to final harvest cut when natural regeneration is planned.</b></li> </ul>	Annual Reforestation/Timber Stand Improvement (TSI) Needs Report, plantation survival surveys, <b>stand certification</b> , silvicultural prescriptions, post-sale administrative review, Timber Management Information System (TMIS), Stand Database/Acres	Annually (plantation survival surveys are 1st, 3rd & 5 <sup>th</sup> growing seasons) or as scheduled. <b>Annual stand certification for natural regeneration stands (5<sup>th</sup> &amp; 10<sup>th</sup> years).</b>	First year survival surveys were conducted on 345 acres of reforestation that was planted in the fall of 2012 and identified a 55% 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				
Items Monitored	Intent	Monitoring Method (Unit of Measure)	Measuring Frequency	Fiscal Year 2014 (FY14) Reporting Information
<b>Timber Stand Improvement Acres and Assumptions</b>	Ensure that: <ul style="list-style-type: none"> <li>• Scheduled TSI projects are accomplished</li> <li>• <b>Reduce insect and disease risk.</b></li> </ul>	Silvicultural prescriptions, accomplishment reports, certified projects, Reforestation/TSI Needs Report, Stand Database/Acres	Annually	153 acres of timber stand improvement (TSI) prescriptions accomplished on the Flagstaff Ranger District as planned. 60 acres of TSI accomplished on Mogollon Rim Ranger District as planned. 50 acres was within the Blue Ridge Urban Interface project. Ten acres were completed within the East Clear Creek Watershed project with help from the Arizona Elk Foundation. 2,318 acres of 4FRI related TSI accomplished in FY2014. All accomplishments are reported in the FACTS database.



## Timber

Timber				
Items Monitored	Intent	Monitoring Method (Unit of Measure)	Measuring Frequency	Fiscal Year 2014 (FY14) Reporting Information
<b>Silvicultural Assumptions and Practices</b>	Ensure that: <ul style="list-style-type: none"> <li>• Appropriate management is applied to Retention and Partial Retention zones and riparian areas,</li> <li>• Rotation age and Culmination of Mean Annual Increment (CMAI) assumptions are correct,</li> <li>• Silvicultural prescriptions follow management area standards,</li> <li>• Silvicultural prescriptions precede vegetative treatments,</li> <li>• Silvicultural prescriptions are practical and achieve desired results</li> </ul>	Silvicultural prescriptions, Environmental Assessments (EA), project reviews	Annually	<p>8,300 acres of silviculture prescriptions were prepared (3,300 acres for the Hochderffer Task Order for 4FRI and approximately 5,000 acres for Wing and Snowplay Task Orders) 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.</p> <p>4,500 acres of silviculture prescriptions completed for the Clints Well South Task Order on Mogollon Rim Ranger District. The prescriptions follow the management standards, as amended, for the following management areas: MA-3, MA-4, MA-6, MA-9, and MA-10. Treatment is expected to commence on sometime during fiscal year 2016.</p> <p>25 acres of grassland restoration was completed in 2014</p> <p>A 46 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.</p>
<b>Timber Assumptions: Volume, Productivity, Condition, Class, Acres Harvested</b>	Ensure the following are correct: <ul style="list-style-type: none"> <li>• Board foot/cubic foot ratios,</li> <li>• Volume/acre yield,</li> <li>• Condition class assignments,</li> <li>• Schedule of acres harvested</li> </ul>	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 (including all FY2014 4FRI task orders; Orion, 89 Mesa, Jacks Buck, and East Clear Creek, and FY2014 timber sales; Saginaw 2, Tule Three, and AZ Snowbowl Lower Ridge Timber Settlement), and standard Forest Service timber cruising software programs and reporting databases, including TIM and FACTS, were used.
<b>Size of Openings</b>	Ensure that: <ul style="list-style-type: none"> <li>• Openings comply with size limits and are periodically evaluated for appropriateness</li> </ul>	EAs, presale and administrative reviews, and post-sale reviews/ Project area	Annually	<p><u>Flagstaff Ranger District</u>: All openings created on the above listed task orders and timber sales 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.</p> <p><u>Mogollon Rim Ranger District</u>: No interspace or regeneration openings were created in 2014 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 &gt;1 acre, 3-5 seed trees are retained.</p>
<b>Acres of Overstory and Final Removal Harvests</b>	Meet Federal regulation, measure prescriptions and effects	TMIS, Staff review of 5% of treatment projects ( <b>at least 2 projects</b> ) /Acres	Annually	No overstory removal or final removal harvests were performed on the Forest in 2014
<b>Acres of Intermediate Harvest</b>	Meet Federal regulation, measure prescriptions and effects	TMIS, Staff review of 5% of treatment projects ( <b>at least 2 projects</b> ) /Acres	Annually	No intermediate harvests were performed on the Forest in 2014.

<b>Timber</b>				
<b>Items Monitored</b>	<b>Intent</b>	<b>Monitoring Method (Unit of Measure)</b>	<b>Measuring Frequency</b>	<b>Fiscal Year 2014 (FY14) Reporting Information</b>
<b>Board Feet of Net Sawtimber Offered, Sold, and Harvested</b>	Meet Federal regulation, measure output, assure timber offered <b>or available for offer meets, but does not exceed, the allowable sale quantity.</b>	Program Accounting & Management Attainment Reporting System (PAMARS; an annual reporting system); programmed harvest reports/million board feet (mbf)	Annually	<p><b>Offered:</b> 24,442 mbf/ 53,134 ccf</p> <p><b>Sold:</b> 27,076 mbf/ 58,894 ccf</p> <p><b>Harvested:</b> approximately 2,900 mbf/ 6,308 ccf</p> <p>Target was set at approximately 41,400 mbf/ 90,000 ccf. This target was set based on the prior year's large influx of 4FRI task orders. Issuing of task orders was re-arranged this year and fewer large volume task orders were issued. Accomplishments were more in line with what the Forest can actually achieve and are very similar to the prior year target.</p>
<b>Cords of Firewood Available</b>	Ensure that: <ul style="list-style-type: none"> <li>• Green firewood is made available,</li> <li>• Potential firewood from timber sales and road building is made reasonably available to the general public before slash disposal</li> </ul>	Review annual total of firewood sale reports, firewood advertised but not sold, and free use/cords	Annually	<p>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.</p> <p>Approximately 5.22 cords of commercial firewood were sold in FY2014. Most of the volume was sold as incidental to some other project, such as powerline clearing.</p> <p><b>Personal Use Paid:</b></p> <ul style="list-style-type: none"> <li>• 15,958 cords</li> <li>• 96,303 mbf/ 12,559 ccf</li> </ul> <p><b>Personal Free Use:</b></p> <ul style="list-style-type: none"> <li>• 1,881 cords</li> <li>• 729 mbf/ 1,480 ccf</li> </ul> <p>No green firewood was made available because there was insufficient capacity on the Forest to establish and administer these areas.</p>
<b>Yield Projections</b>	Ensure that: <ul style="list-style-type: none"> <li>• Yield projections are correct</li> </ul>	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

Timber				
Items Monitored	Intent	Monitoring Method (Unit of Measure)	Measuring Frequency	Fiscal Year 2014 (FY14) Reporting Information
<b>Re-evaluation of Unsuitable Timber Lands</b>	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 FY2014. This process, however, has been incorporated as part of the forest plan revision process, which is ongoing at this time.

### Watershed/Soil/Air

Watershed/Soil/Air				
Items Monitored	Intent	Monitoring Method (Unit of Measure)	Measuring Frequency	Fiscal Year 2014 (FY14) Reporting Information
<b>Watershed Condition of Forest Lands</b>	Meet Federal regulation, ensure that Forest watersheds in satisfactory condition by 2020, assure productivity of the land is maintained.	<p>Watershed Condition Framework, FS-977, May, 2011 and Watershed Condition Technical Guide, FS-978, July, 2011.</p> <p>Soil Condition Field Evaluation Form and Soil Condition rating Guide (FSH amendment 2509.18-99-1.</p> <p>Standard Watershed Condition Inventory according to R3 Hydrology Note 14</p> <p>Photo points, ocular estimates to determine trends/acres.</p>	10% annually	<p>The Watershed Condition Framework was used to assess watershed condition at the 6<sup>th</sup> Hydrologic Unit Code (HUC) level. 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 6<sup>th</sup> code watershed to an improved condition (first in R3).</p> <p>No watershed conditions were changed at the 6<sup>th</sup> HUC level in 2014.</p> <p>In 2012-2013, the Lower Fossil Creek 6th HUC Watershed Restoration Action Plan was completed. This 6<sup>th</sup> HUC watershed was rated as Functioning at Risk. Some essential projects and interim measures were implemented in 2013 and 2014 and monitored with Best Management Practices (BMPs).</p> <p>In 2014, the Walnut Creek – Upper Lake Mary Watershed Restoration Action plan was initiated and is expected to be completed in 2015. This 6<sup>th</sup> HUC watershed was rated Impaired function and essential projects were identified with the objective to improve soil and watershed condition. Implementation and specific monitoring plans will occur under the Record of Decisions for the Four-Forest Restoration Initiative (4FRI) and the Flagstaff Watershed Protection Project (FWPP), both of which were signed in FY2015.</p> <p>Range monitoring (permit/AOI compliance, forage utilization, forage production, condition and trend monitoring) for the grazing year:</p> <ul style="list-style-type: none"> <li>• <u>Flagstaff Ranger District</u>: 367 person days</li> <li>• <u>Red Rock Ranger District/Mogollon Rim Ranger District</u>: 360 person days</li> </ul>

Watershed/Soil/Air				
Items Monitored	Intent	Monitoring Method (Unit of Measure)	Measuring Frequency	Fiscal Year 2014 (FY14) Reporting Information
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	<p>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.</p> <p>Soil and water quality BMPs were monitored for implementation on the following projects in 2014. For each of these projects, the BMP monitoring indicated BMPs were implemented correctly and appeared to be effective. On the Flagstaff Ranger District, 617 acres of lands were treated using timber sales (of which 208 acres are part of Teacup Timber Sale). Mechanical treatment of fuels and timber accomplished about 891 acres on the Orion Task Order located in the Flagstaff Watershed Protection Project footprint and the 89 Mesa Task Order (1427) located within the Schultz Fire area. Both of these task orders are within the Rio de Flag 5<sup>th</sup> HUC watershed.</p> <p>Within the Upper Clear Creek 5<sup>th</sup> HUC watershed, the East Clear Creek Task Order treated 4,255 acres. Treatment is expected to reduce the risk of uncharacteristic wildfire resulting in accelerated erosion, sediment delivery and better protect East Clear Creek water quality.</p> <p>About 21,943 acres of mechanical thinning, broadcast, or pile burning or natural wildfire ignition were accomplished and are expected to reduce the risk of uncharacteristic wildfire. About 8,314 acres of mechanical thinning and broadcast burning were accomplished. Several wildfires were managed for resource benefit, adding up to 13,629 acres. BMPs were implemented and monitored on about 3,446 acres of hazardous fuel reduction outside the Wildland Urban Interface (WUI) with about 4,868 acres treated within the WUI.</p>
	Monitor watershed condition in project areas.	Standard watershed condition transects (per Hydro Note 14)/Project	1 Project/year Forest-wide	<p>In 2014, soil condition assessments were completed in several pastures and ecological units on the West Windmill allotments to determine existing condition. Furthermore, soil condition assessment and monitoring completed was completed on 25,852 acres on the Apache Maid Allotment in the Hog, Winter N. Winter S., Middle Verde, &amp; Beaverhead Flat E. pastures.</p> <p>Soil/watershed condition was monitored on the Fossil Creek allotment to determine hydrologic function and vegetative ground cover.</p>
Riparian Improvement Projects	Resolve Issues at Forest level and meet Federal regulation; review riparian improvement projects for changes in ground cover, species composition, bank stability, stream flow and water quality changes, effectiveness of and compliance with recommendations	Standard watershed condition transects, ocular, estimates and professional judgment/ Project	1 Project/year Forest-wide	<p><b>Fossil Creek Riparian Area Projects:</b> Forest personnel were on site and monitored to assure interim treatments adjacent to Fossil Creek were implemented correctly. The treatments were rehabilitating disturbed areas and closing social trails and access roads leading into Fossil Creek. The monitoring indicated BMPs and resource protection measures were successfully implemented as planned and appear to be effective. Operation and cleanout of temporary latrines also occurred in highly used recreational sites for reduction of <i>E.coli</i> pathogen contamination. Additional follow-up water quality testing is needed to determine if there has been a change in water quality.</p>

<b>Watershed/Soil/Air</b>				
<b>Items Monitored</b>	<b>Intent</b>	<b>Monitoring Method (Unit of Measure)</b>	<b>Measuring Frequency</b>	<b>Fiscal Year 2014 (FY14) Reporting Information</b>
<b>Riparian Areas</b>	Monitor condition and trend of riparian areas photo points.	Standard watershed condition transects, Proper Functioning Condition assessments, ocular, estimates, photo points	5 percent annually	<p>PFC monitoring was conducted on 1.5 miles of streamside riparian areas within 13,658 acres in the Hog and Winter Pastures of Apache Maid and the Bull Pasture of the Walker Basin Allotments. Monitoring in the future will compare to this baseline monitoring on these riparian areas to determine riparian condition and trend.</p> <p>The Spring Institute and a Northern Arizona University did not inventory or monitor new springs in 2014.</p> <p>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.</p>
<b>Road Obliteration</b>	Ensure compliance with Standards and Guidelines concerning road densities. Forest Issue related.	Work accomplishment reports/miles	Annually (Report in years 3, 6, 9)	8 miles of road were decommissioned forest-wide.
<b>Water Quality</b>	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 ( <i>minimum</i> )	<p><b>Friends of the Forest Water Quality Monitoring:</b> 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. These samples are tested for E coli. Exceedences were found after the Slide Fire only 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 and closures on Oak Creek.</p> <p><b>NAU Fossil Creek Fecal Coliform Monitoring:</b> 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. Monitoring was not conducted in 2014.</p> <p>Water quality by stream types monitored by ADEQ can be found at this link <a href="http://www.azdeq.gov/enviro/water/assessment/assess.html">http://www.azdeq.gov/enviro/water/assessment/assess.html</a>. ADEQ monitors several streams on forest in 3 year cycles.</p>

## Minerals

MINERALS				
Items Monitored	Intent	Monitoring Method (Unit of Measure)	Measuring Frequency	Fiscal Year 2014 (FY14) Reporting Information
<b>Compliance with Terms of Minerals Operating Plans</b>	Meet legislative mandate and Agency guidelines.	Field checks/ Plans	Annually	At least 39 personal use permits or activities were administered in existing pits. 188 permits were issued for gathering of saleable minerals in existing personal use pits or approved locations for either county or other permit holders for use on National Forest. Two operating plans were administered for existing mining claim operations. Coconino County was authorized to conduct exploration trenching in Park Knoll Pit. Coordination is continuing with local jurisdictions on mineral resources and pits, including preparing for pit expansion associated with the Rock Pit EA for the 4FRI project.
<b>Non-patented Mining Claim Compliance</b>	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				
Items Monitored	Intent	Monitoring Method (Unit of Measure)	Measuring Frequency	Fiscal Year 2014 (FY14) Reporting Information
<b>Special Use Permits</b>	Process and administer special use permits in accordance with established guidelines.	Land Uses Report (LUR), field inspections/ Permits	Annually	278 lands permits were administered to standard in FY14. Administered to standard includes required field inspections at least once every 5 years. 123 recreation permits were administered to standard. 141 recreation permits (primarily short term recreation events and group use permits) and 116 lands permits/amendments (primarily non-disturbing uses and filming permits) were processed in FY14. The forest has approximately 563 permits in the issued status. Backlog of expired lands permits is being reduced through use of cost recovery fees.
<b>Land Purchase, Acquisition, and Exchange</b>	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 FY14. 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.
<b>Occupancy Trespass</b>	Minimize Forest trespass problems.	Field checks, landline location/ Cases resolved vs. new cases	Annually	1 encroachment case was resolved through a Small Tracts Act case. Work was initiated on the Mountaineer Small Tracts Act cases after the passage of legislation. These encroachment cases are being processed in coordination with a title company in response to the legislation. New cases continue to add to a backlog list of older encroachment cases.
<b>Landline Location</b>	Maintain Forest boundary.	Landline location, MAR target/ Miles	Annually	0.2 miles of boundary line were maintained to standard in FY14 under the lands budget. 20.4 miles of boundary were marked as part of the Four-Forest Restoration Initiative under an agreement with BLM. 3 miles of boundary was maintained through an agreement with Coconino County in support of the Flagstaff Water Protection Project.

**Roads**

<b>ROADS</b>				
<b>Items Monitored</b>	<b>Intent</b>	<b>Monitoring Method (Unit of Measure)</b>	<b>Measuring Frequency</b>	<b>Fiscal Year 2014 (FY14) Reporting Information</b>
<b>Arterial/Collector, Construction/ Reconstruction</b>	Ensure compliance with identified needs for arterial/collector reconstruction. Forest Issue related	Work accomplishment reports/Miles	Annually	<p>Improvements to existing ML 3, 4, and 5 roads - 11 miles                      ML 2 Road Maintenance – 207.6 miles                      ML 3 Road Maintenance – 382.1 miles                      Road Decommissioning - 8 miles</p> <p>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.</p>
<b>Purchaser Credit Roads</b>	Ensure compliance with identified needs for P/C construction/ reconstruction	Work accomplishment reports/Miles	Annually	None.

**Protection**

<b>PROTECTION</b>				
<b>Items Monitored</b>	<b>Intent</b>	<b>Monitoring Method (Unit of Measure)</b>	<b>Measuring Frequency</b>	<b>Fiscal Year 2014 (FY14) Reporting Information</b>
<b>Growth Reduction and Mortality Caused by Insect and Disease Infestations</b>	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	<p>The number of acres impacted by bark beetles decreased considerably in 2014 (2,574), compared to 2013 levels (22,657) 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.</p> <p>All bark beetle species have decreased in mixed-conifer forests, including mountain pine beetle and the Douglas-fir beetle. Noteworthy levels of mountain pine beetle and Douglas-fir beetle were at low levels of 540 acres mapped for each species in 2014. In the spruce fir type, the western balsam bark beetle and spruce beetle have caused only 20 acres of mortality in corkbark fir and Engelmann spruce on the San Francisco Peaks.</p> <p>The number of acres impacted by defoliators increased slightly on the Coconino NF in 2014. The pine sawfly outbreak on the border of the Coconino and Kaibab National Forests continues to be active. The number of acres affected on the Coconino NF increased from 184 acres detected in 2013 to 610 in 2014, still well below the level of 2,120 detected in 2012. The large aspen tortrix, <i>Choristoneura conflictana</i>, defoliator continued to impact of aspen around the north and west sides of the San Francisco Peaks. Mapped acres for this defoliator increased slightly from 1,400 acres in 2013 to 1560 acres in 2014. Mapped acres for this defoliator increased slightly from 1,400 acres in 2013 to 1560 acres in 2014. No Western spruce budworm activity was recorded in 2014.</p> <p>More information, including the 2014 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: <a href="http://www.ForestService.usda.gov/detail/r3/maps-pubs/?cid=stelprdb5176419">http://www.ForestService.usda.gov/detail/r3/maps-pubs/?cid=stelprdb5176419</a></p>
<b>Air Quality</b>	Ensure prescribed fire does not cause violations of State and Federal air quality standards in sensitive areas.	Project reports, field monitoring	Annually	<p>No violations per ADEQ.</p> <p>Field monitoring is consistent with guidelines set in Forest Service Manual 5100, Chapter 5140: Prescribed Fire.</p> <p>Daily prescription (Rx) requests are submitted for approval from ADEQ.</p>
<b>Fuel Treatment Outputs</b>	Ensure balanced fuel treatment outputs, emphasizing utilization.	Accomplishment reports/Acres	Annually	No information available for FY2014.



<b>PROTECTION</b>				
<b>Items Monitored</b>	<b>Intent</b>	<b>Monitoring Method (Unit of Measure)</b>	<b>Measuring Frequency</b>	<b>Fiscal Year 2014 (FY14) Reporting Information</b>
<b>Wildfire Acre PAR's</b>	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	No information available for FY2014.
<b>Cost of Suppression, Protection, Organization, and Net Value Change</b>	Keep fire management program cost effective.	PAMARS/Dollars	Annually	No information available for FY2014.
<b>Fire Suppression Effectiveness</b>	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	No information available for FY2014.

<b>PROTECTION</b>				
<b>Items Monitored</b>	<b>Intent</b>	<b>Monitoring Method (Unit of Measure)</b>	<b>Measuring Frequency</b>	<b>Fiscal Year 2014 (FY14) Reporting Information</b>
<b>Law Enforcement Person Hours</b>	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	<p>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. While warnings continue to be the primary method of addressing motor vehicle violations, there has been an overall increase in tickets for motor vehicle use off of designated trails, roads, and areas in the offseason and field seasons. The use of fines and tickets is increasing for these violations as there is a greater expectation for following the rules given the ongoing education efforts and increased use of ground-based signage and barriers to discourage motor vehicle rule transgressions.</p> <p>FY 2014 statistics include:</p> <p>Fines collected: \$101,183                      Damage to Government property and resources: \$6,677                      Public contacts: 11,268                      Violations issued: 836                      Warnings issued: 454                      Arrests: 20                      Cannabis plants eradicated: 0                      Cannabis plots eradicated: 0</p>

**General Administration**

<b>GENERAL ADMINISTRATION</b>				
<b>Items Monitored</b>	<b>Intent</b>	<b>Monitoring Method (Unit of Measure)</b>	<b>Measuring Frequency</b>	<b>Fiscal Year 2014 (FY14) Reporting Information</b>
<b>Citizen Participation Plans Public Affairs Standards</b>	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 2013 – September 2014, public contacts were made with respect to:
				<p><b>Forest-wide and Multi-District</b></p> <ul style="list-style-type: none"> <li>• City of Flagstaff Water Facility Improvements CE</li> <li>• Forest Plan Revision for the Coconino National Forest EIS</li> <li>• Fossil Creek TMR Road Closures and Decommissioning CE</li> <li>• Four-Forest Restoration Initiative (Kaibab and Coconino) EIS</li> <li>• Glen Canyon to Pinnacle Peak Transmission Line Vegetation Management EA</li> <li>• NPG Cable of Arizona Issuance of 10 Year Permit CE</li> <li>• Oak Creek Overlook Vending Special Use Reauthorization CE</li> <li>• Rock Pit Development: Coconino and Kaibab National Forests EA</li> <li>• Stock Tank Invasive Aquatic Species Management CE</li> </ul>

<b>GENERAL ADMINISTRATION</b>				
<b>Items Monitored</b>	<b>Intent</b>	<b>Monitoring Method (Unit of Measure)</b>	<b>Measuring Frequency</b>	<b>Fiscal Year 2014 (FY14) Reporting Information</b>
<b>Citizen Participation Plans Public Affairs Standards</b>	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 2013 – September 2014, public contacts were made with respect to:
				<p><b><u>Mogollon Rim Ranger District:</u></b></p> <ul style="list-style-type: none"> <li>• Allen Lake Wetland Restoration Project CE</li> <li>• Buck Mountain, Baker Butte Lookout Tower Viewshed Project CE</li> <li>• C.C. Cragin (Blue Ridge) Reservoir Fish Restoration EA</li> <li>• Camping Areas for Group Gathering Special Use Permits, Mogollon Rim District 2014</li> <li>• Clint's Well Underground Powerline Replacement CE</li> <li>• Forty-Four Canyon Recreation Residence Tract Special Use Permit Modification CE</li> <li>• Little Bly Pit Rock Crushing Project CE</li> <li>• Mahan-Landmark Forest Restoration Project</li> <li>• Mogollon Rim Christmas Tree Cutting</li> <li>• Mogollon Rim Ranger District 2014 Special Use Reauthorizations CE</li> </ul> <p><b><u>Flagstaff Ranger District:</u></b></p> <ul style="list-style-type: none"> <li>• Angell Grazing Allotment EA</li> <li>• APS NO1 Youngs to Mormon Lake 69 kV Power Line EA</li> <li>• Arizona Game and Fish Department Water Catchment Restoration CE</li> <li>• Dahl FLPMA Forest Roads Special Use Permit CE</li> <li>• Flagstaff Ranger District 2014 Special Use Reauthorizations CE</li> <li>• Flagstaff Watershed Protection Project EIS</li> <li>• Highway 180 Motorized Trails EA</li> <li>• Hitchin Post Stables Special-Use Permit Reauthorization CE</li> <li>• Hunter Access for Aspen Depredation Area CE</li> <li>• McCormick Pit Native Material Site CE</li> <li>• Mt. Elden/Dry Lake Hills Recreation Planning Project EA</li> <li>• Turkey Butte/Barney Pasture Forest Health and Fuels Reduction Project EA</li> <li>• Windmill West Range Allotment EA</li> </ul>

<b>GENERAL ADMINISTRATION</b>				
<b>Items Monitored</b>	<b>Intent</b>	<b>Monitoring Method (Unit of Measure)</b>	<b>Measuring Frequency</b>	<b>Fiscal Year 2014 (FY14) Reporting Information</b>
<b>Citizen Participation Plans Public Affairs Standards</b>	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 2013 – September 2014, public contacts were made with respect to:
				<p><b>Red Rock Ranger District:</b></p> <ul style="list-style-type: none"> <li>• Apache Maid Rangeland Management Analysis EA</li> <li>• APS Cornville Power Line Rebuild CE</li> <li>• APS VR1 Windmill Ranch 69 kV Line CE</li> <li>• Arizona Water Company Water Storage Tanks EA</li> <li>• Camp Verde Park and Sanitary District Roads CE</li> <li>• Cave Springs Bank Stabilization CE</li> <li>• Cedar Flat Wildlife Habitat and Watershed Enhancement Project CE</li> <li>• Chavez Ranch Road Improvements EA</li> <li>• Chiricahua Leopard Frog Habitat Improvements CE</li> <li>• Cornville Community Trail CE</li> <li>• Cornville Non-Motorized Trail System EA</li> <li>• Cornville Single Track EA</li> <li>• Fossil Creek Wild and Scenic River Comprehensive River Management Plan EA</li> <li>• Greasy Spoon Road Maintenance - Phase 2</li> <li>• Honanki Improvements CE</li> <li>• Hummingbird Garden Eagle Scout Project CE</li> <li>• Lawrence Crossing Toilet CE</li> <li>• Oak Creek Dog Waste Stations CE</li> <li>• Oak Creek Overlook Vending Special Use Reauthorization CE</li> <li>• Red Rock OHV Improvements CE</li> <li>• Red Rock Ranger District 2013 Permit Reauthorizations</li> <li>• Red Rock Trails Phase IV CE</li> <li>• Reissuance of Outfitter/Guide Use in Broken Arrow CE</li> <li>• Road Closures for Threatened, Endangered and Sensitive Species CE</li> <li>• Sedona Marathon CE</li> <li>• Sedona Trails – Phase III CE</li> <li>• Sedona-Oak Creek Alternative Transportation Study EA</li> <li>• Show Low South Land Exchange EIS</li> <li>• Soldiers Pass Motorized Use EA</li> <li>• Spring Creek (Oak Creek Aquatic Species Protection) EA</li> <li>• Spring Creek Aquatic Protection Program EA</li> <li>• Stoneman Lake Overlook Site Improvements CE</li> <li>• Tobias/Flynn Road Access EA</li> <li>• TMR Road Closures and Decommissioning CE</li> <li>• Verde Valley Botanical Area Protection: Fenceline Modification CE</li> <li>• Yavapai Apache Sewer and Utility Line Project CE</li> <li>• Yavapai Vista Toilet CE</li> </ul>

<b>GENERAL ADMINISTRATION</b>				
<b>Items Monitored</b>	<b>Intent</b>	<b>Monitoring Method (Unit of Measure)</b>	<b>Measuring Frequency</b>	<b>Fiscal Year 2014 (FY14) Reporting Information</b>
<b>Verification of Unit Cost Used in Plan Compared to On-the-Ground Cost</b>	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.
<b>Effects of Management on Adjacent Lands on National Forest Goals and Objectives</b>	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.