Four Forest Restoration Initiative, Rim Country EIS

Scenery Specialist Report

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for:
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Introduction

This specialist report will provide a brief description of the project; discuss key assumptions and methodologies used in the analysis; identify existing inventories, monitoring, site visits and public scoping used in the analysis; describe existing landscape character and the scenic integrity of the existing landscape compared against Forest Plan scenery management direction; describe desired conditions; scenic resource features and conditions; addresses effects from the proposed action and associated alternatives presented for the 4FRI Rim Country Project.

Integration of this scenery analysis assures the 4FRI Rim Country Project is consistent with scenery-related Coconino, Apache-Sitgreaves, and Tonto National Forest Land and Resource Management Plan direction, USFS policies, and applicable elements of USFS Scenery Management Systems.

Relevant Law, Regulation, and Policy

All alternatives are designed to guide the Coconino, Apache-Sitgreaves and Tonto NFs management activities in meeting all applicable Federal and State laws, regulations, and policies.

Relevant Laws

The National Environmental Policy Act (1969) (NEPA) sets forth a national policy for the environment that provides for the enhancement of environmental quality. The Act directs agencies to develop practicable methodologies for scenery management of "aesthetically and culturally pleasing surroundings." It also requires a "systematic and interdisciplinary approach which will insure the integrated use of the natural and social sciences and the environmental design arts into planning and decision-making which may have an impact on man's environment."

The National Forest Management Act (1976) (NFMA) directs that the preservation of aesthetic values be analyzed at all planning levels. Part 219.21 requires visual resources to be inventoried and evaluated as an integral part of evaluating alternatives in the planning process, addressing both the landscape's visual attractiveness and the public's visual expectation.

NEPA and NFMA direction is formalized in Forest Service policy regarding scenic resources and more detailed information regarding this direction is described under Forest Service policy.

In addition to NEPA and NFMA, the following laws and regulation are important to the management of scenic and related resources:

The Wilderness Act (1964) – The act dictates that Wilderness is an area of Federal land that will be managed to retain its primeval character and untrammeled setting. It is protected and managed so as to preserve its natural condition and the imprint of man's work must be substantially unnoticeable.

The Wild and Scenic Rivers Act (1968) – The outstandingly remarkable scenic values of rivers eligible or suitable to be included in the system must be carefully managed. Any management activities that could negatively impact the scenic resources, where they are an identified outstandingly remarkable value, should not be conducted or mitigated according the rivers comprehensive management plan.

The National Trails System Act (1968) – This act states that trails should be established within scenic areas and along historic travel routes of the Nation, which are often more remotely located.

The Environmental Quality Act (1970) – This act sets forth a national policy for the environment which provides for the enhancement of environmental quality.

The Forest and Rangeland Renewable Resources Planning Act (1974) – This act provides direction to conduct aesthetic analysis and assess the impacts on aesthetics for timber harvesting. It also provides the framework for natural resource conservation.

The National Forest Management Act (1976) – This act provides direction that the preservation of aesthetic values is analyzed at all planning levels. Part 219.21 requires that the visual resource shall be inventoried and evaluated as an integrated part of evaluating alternatives in the forest planning process, addressing both the landscapes visual attractiveness and the public's visual expectation.

Several USDA handbooks have been developed to establish a framework for management of visual resources. These handbooks and Forest Service manual guidance are discussed in the following sections.

Policy

Resources Planning Act (RPA) includes direction to: "…cut blocks, patches, or strips are shaped to the extent practicable with the natural terrain;…consistent with the protection of…aesthetic resources."

In addition, the Forest Service has routinely included both scenery and recreation as part of the 1960 Multiple Use-Sustained Yield Act.

FSH 1909.13.13a, Chapter 10: "When pertinent to the issues…the Scenery Management System (SMS) should be used to describe…desired conditions and objectives."

FSH 1909.13.2.3: "…"Also, see FSM 2380.61 for landscape aesthetics guidance."

FSM 2380.43.5 "Ensure application of the principles of landscape aesthetics, scenery management, and environmental design in project level planning"

FSM 2380.61 "Refer to the following publications in the Department of Agriculture's National Forest Landscape Management Series for technical guidance in managing landscape aesthetics and scenery." The pertinent publication is USDA Ag Handbook 701, "Landscape Aesthetics: A Handbook for Scenery Management", 2000. This Handbook directs identification of Desired Scenic Character (page 1-3 and 5-5), as does its most recent update "Appendix J Recommended SMS Refinements" 2007, and the "Region 5 SMS Implementation Process" 5/2009.

FSM 2020.5 "Sustainability. Meeting needs of the present generation without compromising the ability of future generations to meet their needs. Sustainability is composed of desirable social, economic, and ecological conditions or trends interacting at varying spatial and temporal scales, embodying the principles of multiple-use and sustained-yield (FSM 1905)."

The following USDA handbooks establish a framework for management of scenic resources. These handbooks were written when the visual management system (VMS) was in place. Although the VMS has now been replaced by the scenery management system, the handbooks still apply to management of scenic resources.

National Forest Landscape Management Volume 1. Agriculture Handbook 434: 1973 Roads, Chapter 4, Agriculture Handbook 483: 1977

Timber, Chapter 5, Agriculture Handbook 559: 1980

Fire, Chapter 6, Agriculture Handbook 608: 1985

Recreation, Chapter 8, Agriculture Handbook 666: 1987

Landscape Aesthetics, A Handbook for Scenery Management, Agriculture Handbook 701: 2000.

Forest Service manual direction provides further clarification to utilize the Scenery Management System in forest and project planning and implementation, including sections 2380.3, 2382, and 2382.3:

2380.3, Policy: It is Forest Service policy to:

Inventory, evaluate, manage, and, where necessary, restore scenery as a fully integrated part of the ecosystems of National Forest System lands and of the land and resource management and planning process.

Employ a systematic, interdisciplinary approach to scenery management to ensure the integrated use of the natural and social sciences and environmental design.

Ensure scenery is treated equally with other resources.

Apply scenery management principles routinely in all National Forest System activities. 2382, Scenery Management: Managing scenery on National Forest System lands entails:

Completing and maintaining an inventory of landscape aesthetics and scenery resources. Establishing goals and objectives for the management of scenery on all National Forest System lands.

2382.3 - Forest Plan Revisions and Scenery Management System

Update the scenery inventory using the Scenery Management System in Agriculture Handbook 701 (FSM 2380.61, para. 2). The recommended timeframe for updating the scenery inventory is prior to or at initiation of Forest land and resource management plan revisions.

Forest Plan Direction

The Coconino, Apache-Sitgreaves and Tonto NFs Plans have recognized the importance of scenery management by providing management guidelines, objectives and desired conditions for visuals. Table 1 summarizes Forest Plan direction for the Coconino NF regarding scenery or visuals. Table 2 summarizes Forest Plan direction for the Apache-Sitgreaves NF. Table 3 summarizes Forest Plan direction for the Tonto NF.

Table 1. Coconino NF Land and Resource Management Plan (2018) direction for scenery

Section	Plan Direction	Page
Chapter 2 Forestwide Management Guidelines for Air Quality	The goals of air quality management are to meet human health standards, to meet visibility goals in areas of high scenic value, and to address and respond to other air quality concerns, such as nuisance smoke.	20
Chapter 2 Forestwide Management Guidelines for Roads	For projects where long-term access is not needed, temporary roads should be used and naturalized in a timely manner. The intention is to have the road footprint, and potential impacts from road use, such as possible introduction of invasive species, modification of scenic integrity objectives, or increased sedimentation into connected waters, on the landscape for as short a time as possible.	100
Chapter 2 Forestwide Management Guidelines for Special Uses	Vegetation that does not interfere with meeting vegetation clearance requirements in rights- of-ways should be retained to allow screening for scenery, habitat for species, and corridors for wildlife movement.	106

Chapter 2 Forestwide Management Guidelines for Recreation	The diverse landscapes of the Coconino NF offer a variety of settings for a broad range of recreational opportunities in all seasons and access to natural, wild places.	109
Chapter 2 Forestwide Management Guidelines for Recreation	Developed recreation sites should be managed to discourage or prohibit broken or cut tree limbs or the removal of all downed woody debris to maintain a natural-appearing landscape, to maintain the integrity of the site, and to control accelerated erosion.	112
Chapter 2 Forestwide Desired Conditions for Scenery	The scenic values of the Coconino NF are conserved and enhanced. Visitors see that the forest is being actively managed through visual cues such as seeing forests and grasslands with more historic conditions where there are abundant native wildflowers, grasses, and forbs; some fire effects where appropriate; and vegetation management to frame views from trails and or provide some privacy for users of developed recreation sites.	119
Chapter 2 Forestwide Desired Conditions for Scenery	Management activities maintain or contribute to the desired scenic integrity.	119
Chapter 2 Forestwide Desired Conditions for Scenery	Long-term soil and plant productivity, and proper functioning ecosystems and watersheds are important components of landscape character.	120
Chapter 2 Forestwide Desired Conditions for Scenery	Vegetation openings and stand boundaries are naturally shaped and are oriented to contours and existing vegetation patterns to blend with existing landscape characteristics, except where other natural resource concerns need different shapes or patterns, such as along powerline corridors.	120
Chapter 2 Forestwide Desired Conditions for Scenery	Meadows and riparian areas are visually appealing and evidence of physical impacts is confined to specified road crossings, trail crossings, and access points.	120
Chapter 2 Forestwide Desired Conditions for Scenery	Constructed features, facilities, and management activities closely follow the form, line, color, texture, and pattern common to the landscape character. Where possible, these structures are visually subordinate to the surrounding landscape.	120
Chapter 2 Forestwide Desired Conditions for Scenery	Rock pits, borrow areas, and open pit mines have low to very low scenic integrity and are not seen from visually sensitive travelways and viewing points to the extent possible.11	120
Chapter 2 Forestwide Objectives for Scenery	Rehabilitate12 at least 25,000 acres that do not meet the desired SIO by at least one level within 10 years of plan approval.	120
Chapter 2 Forestwide Guidelines for Scenery	Management activities and permitted uses should be designed and implemented to maintain or move toward the desired SIOs.	121
Chapter 2 Forestwide Guidelines for Scenery	Evidence of fire management activities should only be apparent in the short term (as determined by site-specific information) to maintain SIOs. This guideline would not apply to areas of uncharacteristic fire, which may take longer to recover scenic integrity objectives. This guideline also would not apply to evidence of fire that is within the natural range of variability, such as an appropriate amount of burned standing trees or charred needles.	121
Chapter 2 Forestwide Guidelines for Scenery	When possible, slash piles, new log landings, temporary roads, designated skid trails, dozer- created firelines, and other visual impacts from management activities should be located out of view of Concern Level 1 and 2 travel routes to avoid observation of bare mineral soil and ground-disturbing management activities. When avoiding these locations is not possible, the evidence of management activities should be restored in a timely manner following completion of the activity to harmonize with the surrounding landscape.	121
Chapter 2 Forestwide Guidelines for Scenery	Stems should be flush cut, if possible, or cut less than 8 inches above ground (uphill side), where topography and operational safety allows, to maintain the scenic integrity of the immediate foreground of Concern Level 1 and 2 travel routes.	121

Chapter 3 Management Areas Pine Belt	The dominant ponderosa pine vegetation is interspersed with pinyon juniper, grassland, mixed conifer, chaparral, and wetland habitats. Dispersed and developed recreation opportunities are available. Mountain bike riding, hiking, horseback riding, snowmobiling, and scenery- and wildlife-based recreation are common. 89,663 Acres are within the project area.	128
Chapter 3 Management Areas Anderson Mesa	This large MA is characterized by grasslands, pinyon juniper, and wetlands on a large, relatively flat mesa located on the western border of the Coconino NF. This area is known for wildlife-based recreation such as hunting, fishing, and wildlife viewing as well as hiking, mountain biking, motorized recreation, rock climbing, and horseback riding. Reservoirs such as Long Lake, Kinnikinnick Lake, Ashurst Lake, and Soldier Lake are developed recreation sites. 23,370 Acres are within the project area.	142
Chapter 3 Management Areas Verde Valley	Characterized by open landscapes, expansive views, riparian areas along perennial and intermittent drainages, and rugged topography in many areas. White calcium-rich soils (the Verde Formation) occupy a portion of this MA and support a unique species assemblage. The vegetation is predominantly desert, grassland, chaparral, and pinyon juniper, with riparian forests along stream channels. Perennial waters in this MA include portions of the Verde River, Oak Creek, Wet Beaver Creek, West Clear Creek, and Fossil Creek, which is also designated as an Outstanding Arizona Water. 1,052 Acres are within the project area.	160
Chapter 3 Management Areas Long Valley	Long Valley MA vegetation is predominantly ponderosa pine, but also includes grasslands, riparian, pinyon juniper, mixed conifer, and wetlands. 155,370 Acres are within the project area.	163
Chapter 3 Management Areas East Clear Creek	Vegetation is predominantly ponderosa pine and mixed conifer with scattered pinyon juniper, high-elevation grasslands, riparian, and wetlands. It also contains East Clear Creek, an eligible wild and scenic river segment shared with the Apache-Sitgreaves NFs. 53,124 Acres are within the project area.	165
Chapter 3 Management Areas C.C. Cragin Watersheds	1. Predominant vegetation is ponderosa pine and mixed conifer with scatter pockets of riparian, grasslands, and wetlands. Numerous cool moist drainages are separated by drier forested ridges providing undisturbed habitat for forest dwelling species, and solitude and quiet for people. There are several campgrounds in the MA and the Arizona National Scenic Trail crosses this management area. 2. Roads and trails do not dominate any portion of the landscape and are only provided where necessary for access to the area. 45,711 Acres are within the project area.	167
Chapter 3 Special Areas Barbershop Canyon	Barbershop Canyon is a 13.5-mile-long segment that starts near the Mogollon Rim and runs to the confluence of East Clear Creek. This segment has been identified as potentially eligible for inclusion in the National Wild and Scenic Rivers System under the wild classification. This segment has outstandingly remarkable values in the form of fish habitat and scenery.	179
Chapter 3 Special Areas East Clear Creek	East Clear Creek is a 38.6-mile-long segment that starts at the crossing of Forest Road 96 and runs northeast to the forest boundary. This segment has been identified as potentially eligible for inclusion in the National Wild and Scenic Rivers System under the scenic classification. This segment has outstandingly remarkable values in the form of fish habitat and scenery.	179
Chapter 3 Special Areas Leonard Canyon	Leonard Canyon is a 23.5-mile-long segment that starts at the Knoll Lake Dam and runs to the confluence of East Clear Creek. This segment has been identified as potentially eligible for inclusion in the National Wild and Scenic Rivers System under the recreational classification. This segment has outstandingly remarkable values in the form of fish habitat.	180
Chapter 3 Special Areas West Clear Creek Segment 1	West Clear Creek, Segment 1, is a 32.5-mile-long segment that starts at the headwaters for West Clear Creek and runs west to the western boundary of the West Clear Creek Wilderness. This segment has been identified as potentially eligible for inclusion in the National Wild and Scenic Rivers System under the wild classification. This segment has outstandingly remarkable values in the form of scenery, recreation, geology, heritage, wildlife, fish habitat, riparian, and ecology.	180

Chapter 3 Special Areas West Clear Creek Segment 2	West Clear Creek, Segment 2, is a 6.3-mile-long segment that starts at the western boundary of the West Clear Creek Wilderness and runs west to the Clear Creek dispersed camping area. This segment has been identified as potentially eligible for inclusion in the National Wild and Scenic Rivers System under the scenic classification. This segment has outstandingly remarkable values in the form of recreation, heritage, wildlife, fish habitat, and riparian.	180
Chapter 3 Special Areas Arizona National Scenic Trail	The Arizona National Scenic Trail is a non-motorized, primitive trail that stretches over 800 miles from Mexico to Utah across Arizona…It showcases the States diverse life zones and scenery.	182
Chapter 3 Special Areas General George Crook National Trail	The General George Crook National Trail is multi-use and popular with equestrians and mountain bikers as well as hikers. The trail was blazed along the escarpment of the Mogollon Rim, from Fort Verde to Fort Apache.	183
Chapter 3 Special Areas Desired Conditions – National Scenic and Recreation Trails	1. Scenic integrity and broad views of the surrounding landscapes are retained on national scenic trails and national recreation trails. 2. The integrity of cultural and natural resources, scenery, or recreational experiences is maintained along designated national trails on the Coconino NF. 3. In remote areas on national scenic trails, the sights and sounds of roads, motorized trails, utility corridors, and other facilities and infrastructure are rarely encountered. 4. The ANST is a well-defined trail that provides for high-quality hiking, horseback riding, mountain biking, and cross-country skiing on a shared trail with other compatible non-motorized uses. The trail is located in a highly scenic setting and the significant scenic, natural, historic, and cultural resources along the trail's corridor are conserved. 5. The ANST provides opportunities to experience a variety of vegetation, terrain, and scenery. Visitors can enjoy a simple day hike to multi-week hikes along the 8 trail passages (over 165 miles) that cross the forest. Wild and remote, backcountry segments of the route provide opportunities for solitude, immersion in natural landscapes, and primitive outdoor recreation. Front-country and more easily accessible trail segments connect to communities that lend their own character and history to each section of the trail. 6. The ANST is well maintained, signed, and passable. Alternate routes are made available in the case of temporary closures resulting from natural events, such as fire or flood, or land management activities. 7. The historic route, features, and associated values along the General George Crook Recreation Trail are preserved. 8. Foot and horse travel are the emphasized modes of transportation on the General George Crook Recreation Trail.	184

Chapter 3 Special Areas Guidlines – National Scenic and Recreation Trails	1. Management activities should be designed and implemented to maintain long-term scenic values within and adjacent to national scenic trail corridors. 2. To retain the character for which a national scenic trail was designated, management activities should not result in recreation setting changes from less to more developed, particularly within the foreground. 3. Infrastructure and facilities should be designed to be compatible with the scenic, natural, historic, and cultural qualities for which a national scenic trail was established and the areas through which it passes 4. New road or motorized trail construction across or adjacent to a national scenic trail should be avoided to protect the non-motorized setting and recreational experiences. 5. Using the ANST for landings or as a temporary road for any purpose should not be allowed. The purpose of this guideline is to provide for a natural-appearing setting and to avoid visual, aural, and resource impacts. 6. If forest health projects result in short-term impacts to the scenic integrity of the ANST, design features or mitigation measures should be included to minimize visual impacts within and adjacent to the trail corridor (within visible foreground at a minimum). 7. The General George Crook National Recreation Trail should be managed to preserve evidence of historic roadway and landscape character, including related historic trees, markers, gravesites, and water holes within a 200-foot corridor.	185

Table 2. Apache-Sitgreaves NF Land and Resource Management Plan (2018) direction for scenery

Description	Forest Plan Management Direction	Page
Goals Chapter 2 Forestwide Management Guidelines for Landscape Scale Disturbance Events	Projects and activities should include both short and long term provisions for scenic integrity, especially in sensitive foreground areas (high and very high scenic integrity).	68
Goals Chapter 2 Forestwide Management Desired Conditions for Overall Recreation Opportunities	1. The Apache-Sitgreaves NFs offer a spectrum of recreation settings and opportunities varying from primitive to rural and dispersed to developed, with an emphasis on the natural appearing character of the forests. 2. Inventoried roadless areas (IRAs) maintain their overall roadless character.	70
Goals Chapter 2 Forestwide Management Guidelines for Overall Recreation Opportunities	Recreation related project level decisions and implementation activities should be consistent with mapped classes and setting descriptions in the recreation opportunity spectrum (ROS).	70
Goals Chapter 2 Forestwide Management Desired Conditions for Developed Recreation	Developed campgrounds are places where structures and human caused vegetation changes may be seen but they do not dominate the view or attract attention (low to moderate scenic integrity). Human activities in the areas visible from campgrounds (foreground to middle ground, 300 feet to 4 miles) should not attract attention or stand out, and the landscapes should appear natural (moderate to high scenic integrity).	73

Goals Chapter 2 Forestwide Management Desired Conditions for Scenic Byways	1. Scenic byways are considered special areas by the Forest Service. From the Desert to Tall Pines Scenic Road passes through the project area and White Mountain Scenic Road is adjacent to it. 2. Viewsheds along scenic byways provide natural appearing landscapes and enhance recreation tourism that supports local communities. 3. The intrinsic qualities identified for each scenic byway remain intact. 4. Scenic byways exhibit natural appearing landscapes where human activities do not stand out in the foreground, up to one-half mile (high scenic integrity).	80
Goals Chapter 2 Forestwide Management Guidelines for Scenic Byways	Visual impacts from vegetation treatments, recreation uses, range developments, and other structures should blend with the overall landscape character along scenic byways.	80
Goals Chapter 2 Forestwide Management Desired Conditions for National Recreation Trails	The immediate foreground (0 to 200 feet) views from the NRTs vary from natural appearing landscapes where human activities do not stand out (high scenic integrity) to unaltered landscapes where generally only ecological changes occur (very high scenic integrity).	81
Goals Chapter 2 Forestwide Management Standards for National Recreation Trails	Visual impacts from vegetation treatments, wildland fire, recreation uses, range developments, and other structures will blend with the overall landscape character along national recreation trails.	81
Goals Chapter 2 Forestwide Management Guidelines for National Recreation Trails	The General George Crook National Recreation Trail should be managed to preserve evidence of historic roadway and landscape character, including related historic trees, markers, gravesites, and water holes within a 200-foot corridor.	81
Goals Chapter 2 Forestwide Management Desired Conditions for Eligible Wild and Scenic Rivers	1. East Clear Creek (Scenic) and Leonard Canyon (Recreation) are Eligible Wild and Scenic rivers on the Apache Sitgreaves NF. 2. Eligible and suitable wild river segments display unaltered landscapes where generally only ecological changes occur (very high scenic integrity) and provide primitive and/or semiprimitive nonmotorized recreation opportunities. 3. Eligible and suitable scenic river segments display landscapes which vary from slightly altered where human activities may be seen but do not attract attention (moderate scenic integrity) to natural appearing where human activities do not stand out (high scenic integrity) and provide semiprimitive nonmotorized, semiprimitive motorized, and/or roaded natural recreation opportunities. 4. Eligible and suitable recreational river segments display landscapes which vary from moderately altered where human activities are evident (low scenic integrity) to slightly altered where human activities may be seen but do not attract attention (moderate scenic integrity) and provide primitive, semiprimitive nonmotorized, semiprimitive motorized, and/or roaded natural recreation opportunities.	84
Goals Chapter 2 Forestwide Management Approach for Eligible Wild and Scenic Rivers	Where eligible or suitable wild and scenic rivers segments occur (all management areas), the most restrictive management direction applies.	84

Goals Chapter 2 Forestwide Management Desired Conditions for Scenic Resources	1. The Apache-Sitgreaves NFs appear predominantly natural, and human activities do not dominate the landscape. 2. The natural and cultural features of the landscapes that provide a “sense of place” are intact. 3. Landscapes possess vegetation patterns and compositions that are naturally variable in appearance and contribute to scenic values. 4. Visitors have opportunities to experience important scenic elements including fall colors, rolling grasslands, picturesque vistas, and green riparian corridors. 5. Lakes (reservoirs) and surrounding lands (¼ mile from the shore) provide landscapes which vary from slightly altered where human activities may be seen but do not attract attention (moderate scenic integrity) to natural appearing where human activities do not stand out (high scenic integrity). 6. The scenic vistas associated with canyons and other landforms retain their scenic integrity. 7. The vistas—both from and onto—the Mogollon Rim exhibit landscapes which vary from natural appearing where human activities do not stand out (high scenic integrity) to unaltered where generally only ecological changes occur (very high scenic integrity).	85
Goals Chapter 2 Forestwide Management Objectives for Scenic Resources	Annually, accomplish an average of five projects to enhance scenic resources (e.g., restore grasslands and aspen, remove unnecessary fences, close and rehabilitate unneeded gravel/cinder pits).	85
Goals Chapter 2 Forestwide Management Guidelines for Scenic Resources	1. Constructed features and landscape alterations should be designed to complement the natural setting. 2. Projects or activities in primitive and semiprimitive recreation opportunity spectrum (ROS) classes should be designed to maintain a predominately natural appearing environment.	85
Goals Chapter 2 Forestwide Management Approaches for Scenic Resources	1. Management emphasis is to maintain the scenic qualities of the Apache-Sitgreaves NFs that contribute to the forests’ niche (e.g., rolling grasslands, rugged desert terrain, lush forests, fall colors). 2. The Scenery Management System (SMS) is a tool for inventorying and managing scenic resources. This system is used to incorporate scenery management principles into the planning, design, and implementation of projects and activities.	85
Goals Chapter 2 Forestwide Management Desired Conditions for Mineral and Geology	Mineral developments, including pits, mines, equipment, and associated structures, do not dominate the scenic landscape.	99
Goals Chapter 2 Forestwide Management Guidelines for Mineral and Geology	1. Mineral material resource sites should be located where economical and the scenic integrity objectives can be met. Adverse visual impacts should be minimized. 2. Some gravel and cinder pits are managed for very low scenic integrity and may dominate the landscape when viewed from nearby.	99
Goals Chapter 2 Forestwide Management Desired Conditons for Special Uses	Energy developments and other special uses are not major features on the landscape and should not attract attention (moderate scenic integrity).	101
Goals Chapter 2 Forestwide Management Desired Conditons for Special Uses	Developed energy corridors are managed for very low scenic integrity where vegetation and structural changes may attract attention and dominate the landscape when viewed from nearby.	103

Chapter 3 Management Area General Forest	Landscapes in the General Forest Management Area vary from moderately altered where human activities are evident (low scenic integrity) to natural where generally only ecological changes occur (very high scenic integrity). Recreation opportunities range from semiprimitive nonmotorized to rural. 417,565 Acres are within the project area.	112
Chapter 3 Management Area Community-Forest Intermix	1. Landscapes in the Community-Forest Intermix Management Area vary from moderately altered where human activities are evident (low scenic integrity) to natural appearing where human activities do not stand out (high scenic integrity). 2. The Community-Forest Intermix Management Area is composed of smaller groups of trees that are more widely spaced than other forested areas. Ponderosa pine and dry mixed conifer forest structure is similar to forestwide conditions or is composed of smaller and more widely spaced tree groups than in the general forest. Wet mixed conifer and spruce-fir forests are growing in an overall more open condition than the wet mixed conifer forest outside of the Community-Forest Intermix Management Area. Piñon-juniper stands have open canopy conditions. Grasslands have less than 10 percent woody canopy cover. 3. Recreation opportunities range from roaded natural to rural. 23,365 Acres are within the project area.	113
Chapter 3 Management Area High Use Developed Recreation Area	1. The High Use Developed Recreation Area Management Area are associated with, and often provide, access to popular destinations, transportation corridors, scenic byways, scenic vistas, lakes, and streams. The surrounding landscape is natural appearing, pastoral, or historic with variations created by the recreational facilities. 2. Management should focus on operation and maintenance, safety, aesthetics, and control of noxious weeds and nonnative invasive species. 3. Recreation opportunities range from semiprimitive motorized to rural. 8096 Acres are within the project area.	115
Chapter 3 Management Area Energy Corridor	1. Vegetation consists predominantly of grasses, forbs, shrubs, low-growing trees, and sapling-sized trees. 2. Within and adjacent to energy corridors, vegetation should be managed similarly to the Community-Forest Intermix Management Area so that facilities stay operational and reduce the hazards of human-caused damage, damage from wildland fire, and falling trees. 3. Clearing of vegetation along rights-of-way, facilities, and permitted sites should be limited to that which achieves desired conditions, abates an identified hazard to the facility, or for operational efficiency and weed control. 4. They are managed for very low scenic integrity where vegetation and structural changes may attract attention and dominate the landscape when viewed from nearby. 1511 Acres are within the project area.	116
Chapter 3 Management Area Wild Horse Territory	1. The Wild Horse Territory Management Area contains landscapes that vary from moderately altered where human activities are evident (low scenic integrity) to natural appearing where human activities do not stand out (high scenic integrity). 2. Recreation opportunities range from semiprimitive nonmotorized to roaded natural. 18,761 Acres are within the project area.	118
Chapter 3 Management Area Wildlife Quiet Area	1. Landscapes in WQAs vary from slightly altered where human activities may be seen but do not attract attention (moderate scenic integrity) to natural appearing where human activities do not stand out (high scenic integrity). 2. WQAs provide semiprimitive nonmotorized recreation opportunities, including relatively quiet recreation opportunities close to or adjacent to intensively used areas. 22,401 Acres are within the project area.	120
Chapter 3 Management Area Natural Landscape	1. Landscapes vary from natural appearing where human activities do not stand out (high scenic integrity) to natural where generally only ecological changes occur (very high scenic integrity), except as described below. 2. Roads and human structures may be present, although uncommon. 3. Inventoried roadless areas (IRAs) maintain their overall roadless character. 4. Developed campgrounds, picnic areas, trailheads, and roads passable by passenger cars provide roaded natural recreation opportunities. Landscapes within and immediately adjacent to these features remain scenic. They may be slightly	122

	altered where human activities may be seen but do not attract attention (moderate scenic integrity) to natural appearing where human activities do not stand out (high scenic integrity). 5. While emphasizing semiprimitive nonmotorized and primitive recreation opportunities, motorized travel may occur on designated NFS roads and motorized trails. 13,191 Acres are within the project area. 6. New mineral material pits shall not be authorized.	

Table 3. **Summary of the Tonto Forest Plan (1985) management direction for scenery**

Description	Forest Plan Management Direction	Page
Management Area Mogollon Rim- (4D)	1. This management area includes the ponderosa pine forested area below the Mogollon Rim. The area includes 13 developed and public service sites. 2. Coordinate with Apache-Sitgreaves and Coconino National Forests when activities could affect visual quality as viewed from on top of the Mogollon Rim. 3. Manage for VQO's ranging from retention to maximum modification. The area at the face of the Mogollon Rim is VQO retention. 4. Visual quality protection will be emphasized in the area (Analysis Area 5542) of the Highline Trail, a National Recreation Trail. 128,875 Acres within the project area.	127
Management Area Mogollon Rim- (5D)	1. This management area includes the ponderosa pine forested area below the Mogollon Rim and in the Sierra Ancha Mountains. 2. Coordinate with Apache-Sitgreaves and Coconino National Forests when activities could affect visual quality as viewed from on top of the Mogollon Rim. 3. Manage for VQO's ranging from retention to maximum modification. The area at the face of the Mogollon Rim is VQO retention. 4. Visual quality protection will be emphasized in the area (Analysis Area 5542) of the Highline Trail, a National Recreation Trail. 128,875 Acres within the project area. 111,272 Acres within the project area.	151
Management Area General Management Area (1F, 2F, 3I, 4F, 5G, 6J)	1. Manage for VQO's ranging from retention to maximum modification 2. Refine variety classes, sensitivity levels, and visual quality objectives when needed for project-level planning	85-193

Purpose and Need for Action

The purpose and need for the Rim Country Project was determined by comparing the existing conditions in the project area to the desired conditions in the land and resource management plans (forest plans). The purpose of the Rim Country Project is to reestablish and restore forest structure and pattern, forest health, and vegetation composition and diversity in ponderosa pine ecosystems to conditions within the natural range of variation, thus moving the project area toward the desired conditions. The outcome of improving structure and function is increased ecosystem resiliency. Resiliency increases the ability of an ecosystem to survive natural disturbances such as fire, insects and disease, and climate change (FSM 2020.5) without changing its inherent function. The action is needed to:

- **Increase forest resiliency and sustainability:** Resiliency increases the ability of the ponderosa pine and mixed conifer-frequent fire forest types to survive natural disturbances and stressors such as fire, insect and disease outbreaks, and climate change (FSM 2020.5). There is a need to restore the frequent low-severity fire regimes in which the forest in the Rim Country project area evolved. The Rim

Country Project is expected to move over 1,000,000 acres toward comprehensive, landscape-scale restoration and bring the project area back to, or move it toward desired conditions as described in the Apache-Sitgreaves, Coconino, and Tonto Forest Plans, and help to establish sustainable, resilient, and functioning ecosystems.

- **Reduce risk of undesirable fire effects:** There is a need to reduce the risk of undesirable fire behavior and effects, which currently pose a threat to ecosystem function and services, and human safety, lives, and values. Restoring fire regimes in forests and grasslands will decrease the risks of post-fire flooding and debris flows that cause loss of soil productivity, water quality, and watershed function. Reducing the potential for undesirable fire effects and reducing excessive fuel loadings will protect terrestrial and aquatic species habitat as they increase resiliency to fires.
- **Improve terrestrial and aquatic species habitat:** There is a need to move the Rim Country project area toward desired conditions for snags, coarse woody debris, forest structural stages, and stream habitat complexity. There is a need to retain as many old and large trees as possible, recognizing the ecological and socio-political importance of these trees. Where restoration activities occur in the ponderosa pine and dry mixed conifer cover types, there is a need to maintain and promote the development of old growth characteristics and components.
- **Improve the condition and function of streams and springs:** There is a need to improve the condition and function of riparian areas, wet meadows, streams, and springs in the Rim Country project area in order to sustain these features for terrestrial and aquatic habitat, as well as for human use. Reducing road density and improving road and stream crossings would maintain natural flow regimes, provide connectivity for aquatic species and habitats, and reduce sediment delivery to streams and other water bodies.
- **Restore woody riparian vegetation:** Restoring native riparian vegetation, including large conifers and willows in some cover types, would reduce sedimentation to stream habitat, provide stream shading, maintain cool-water conditions, and provide large wood recruitment to streams to improve habitat complexity. This may include maintaining and promoting existing vegetation, reducing conifer tree encroachment and noxious weeds, planting desirable species such as willows where they have been extirpated, and returning fire to riparian areas. Re-establishment of woody riparian vegetation will also benefit aquatic and terrestrial fish and wildlife species.
- **Roads.** There is a need to have adequate access for project implementation, but then decommission temporary roads after use to restore these areas once project activities are completed. In addition, there is a need to decommission unneeded routes as part of the restoration of the landscape in the project area.
- **Preserve cultural resources:** There is a need to reduce threats to cultural resources caused by overly dense vegetation and soil erosion. Though most archaeological sites can tolerate low-severity fire, all are very vulnerable to the effects of high severity fire in unnaturally high fuel loads and to the soil loss that occurs in post-fire flooding.
- **Support sustainable forest products industries:** As a primary tool to conduct accelerated forest restoration, there is a need to support appropriately-scaled, sustainable, forest products industries that strengthen local economies, while conserving natural resources and aesthetic values.

Proposed Action

To meet the purpose and need for the Rim Country Project and move the project area toward desired conditions, the Apache-Sitgreaves, Coconino, and Tonto National Forests propose mechanical thinning, prescribed fire, and other restoration activities throughout the project area that would make the forest more resilient to natural disturbances such as fire, insect and disease, and climate change. Restoration activities are needed to maintain or restore forest structure and pattern, desired fire regimes, and watershed and ecosystem health and function in ponderosa pine, ponderosa pine-gambel oak, ponderosa

pine-evergreen oak, frequent fire mixed conifer (dry mixed conifer), aspen, and grassland cover types, moving them toward conditions within the natural range of variation. See the Final Environmental Impact Statement for Four-Forest Restoration Initiative Rim Country for detailed descriptions of the proposed action.

To meet the project's purpose and need, the existing Tonto Forest Plan would need to be amended to provide for areas of grass, forbs, and shrubs interspersed with tree groups and allow for treatments to move tree group patterns, interspaces, and stand density toward the natural range of variation. Amending these forest plans would allow for treatments that improve MSO nesting and roosting habitat as defined in the Mexican spotted owl recovery plan. The desired conditions related in the project's purpose and need are consistent with the revised Apache-Sitgreaves and Coconino Forest Plans. Amendments to the Tonto Forest Plan would provide consistency in meeting desired conditions for ponderosa pine and mixed conifer forests across the Rim Country project area.

Figure 1 shows the extent of the proposed 4FRI Rim Country project.

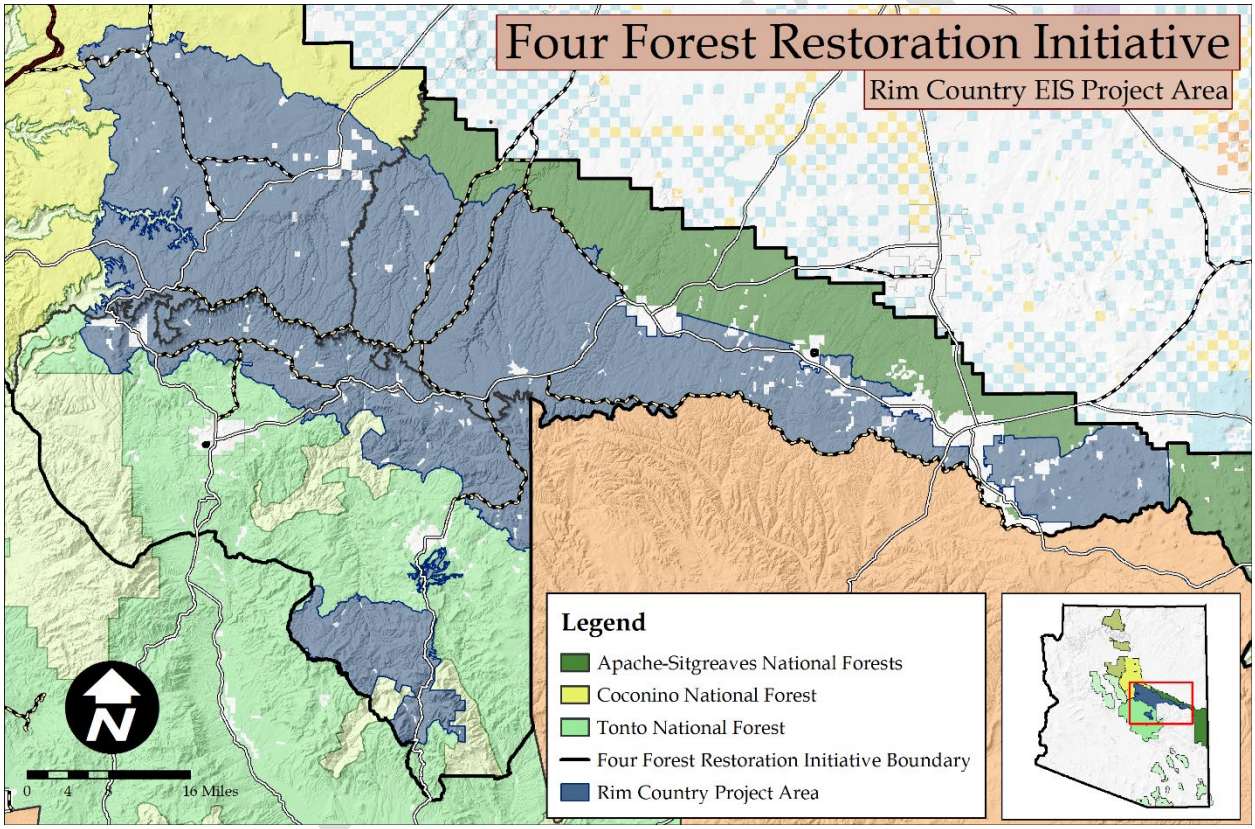

Figure 1. 4FRI Rim Country Project Area

Summary of Alternatives and Design Features

This report documents the analysis of effects of proposed 4FRI Rim Country restoration treatments on scenic resources located in the area. The Forest Service developed three alternatives considered in detail, including No Action (Alternative 1), the proposed action (Alternative 2) and a proposed additional focused alternative action (Alternative 3). See the Final Environmental Impact Statement for Four-Forest Restoration Initiative Rim Country for detailed descriptions of the alternatives.

Alternative 1 – No Action

Alternative 1 is the no action alternative as required by 40 CFR 1502.14(c).[1] It represents no changes to current management, and current forest plans would continue to be implemented. Ongoing vegetation treatments and fire management activities, as well as road maintenance, recreation, firewood gathering, authorized livestock grazing, and other activities already authorized in separate NEPA decisions would continue. There would be no other restoration activities approved with the Rim Country Project. The potential direct, indirect, and cumulative effects from no action will be analyzed. The no action alternative is the baseline for assessing the action alternatives (Alternatives 2 and 3).

Items Common to All Action Alternatives

Alternatives 2 and 3 of the proposed actions include:

- **Grassland and Meadow Restoration:** Includes reducing or eliminating tree encroachment (pines and junipers), and applying prescribed fire. Trees established since interruption of the historic fire regime would be removed, promoting and re-establishing the historic meadow edge. All pre-settlement trees would be retained and replacement trees left where evidence of historical large trees exist. Grasslands and meadows would be treated with prescribed fire where and when feasible.

- **Road Decommissioning:** Stabilizing and restoring of unneeded roads to a more natural state would be accomplished with a variety of methods, including: ripping compacted road surfaces and seeding, re-establishing former drainage patterns, removing culverts, scattering slash and/or large rocks on the road surface, blocking the entrance to the roadway, completely eliminating the roadway by returning it to natural contours, constructing water bars to prevent erosion, or pulling berms back into the roadway.

- **Road and Trail Relocation/Reconstruction:** Specific treatments for roads, trails, and unauthorized routes that are affecting water resources would be evaluated prior to mechanical and fire treatments in the vicinity. Generally, routes crossing and those within 300 feet of streams and waterbodies are the highest priority for evaluation and treatment. Treatments could include: adding gravel to the road surface of existing authorized routes, stabilizing slopes, and restoring vegetation; closing roads, trails, or unauthorized routes by blocking the entrance or installing water bars; removing culverts, reestablishing drainages, removing unstable fills, pulling back road shoulders, and scattering slash on the roadbed; and obliterating the roadbed by restoring natural contours and slopes. Specific treatments for improving stream crossings that are affecting water resources would be evaluated prior to mechanical and fire treatments in the vicinity. Treatments could include: armoring downstream outlets of culverts, upsizing existing culverts, installing culverts or additional culverts, installing culvert arrays to mimic existing channel width, installing low water crossings, installing bridges, restoring downstream channels created from crossings, using sediment reduction methods on connected disturbed areas upstream from roads that connect to the drainage, paving crossings, and relocating the segment of the road that has the crossing issue out of the stream.
- **Spring Restoration:** Specific treatments to restore springs would be identified prior to mechanical and fire treatments in the vicinity. Treatments could include: removing tree canopy close to the spring, applying fire, re-plumbing the spring improvements to conserve water, protecting the spring with fencing, and removing or relocating adjacent roads or trails.
- **Riparian Stream and Stream Channel Restoration:** Restoration is needed to restore the functionality of these streams. Specific treatments to restore riparian streams and stream channels would be identified prior to mechanical and fire treatments in the vicinity. Treatments could include: reestablishing former drainage patterns, stabilizing slopes, restoring vegetation, protecting sites from

[1] http://ww.nepa.gov/nepa/regs/ceq/1502.htm#1502.14

grazing ungulates, removal of upland species that compete with riparian species, returning fire to the system (prescribed fire), and/or removing stock tanks. The emphasis will be on non-structural rather than structural methods.

- **Stream Habitat Restoration:** Proposed stream habitat treatments may be needed within all or some portion of the fish-bearing streams. Restoration treatments may include channel restoration (one rock dams, grade control or induced meandering) and channel structural improvements (felling or girdling trees to provide large woody debris for cover and habitat complexity).
- **Aspen Restoration:** Remove post-settlement conifers within 66 feet (one chain) of the aspen clone. Within the clone, remove aspen, disturb the ground, and/or apply fire as needed to stimulate suckering. Evaluate the need for barriers to reduce ungulate browsing.

Alternative 2 – Modified Proposed Action

The Coconino, Apache-Sitgreaves and Tonto NFs propose to conduct more than 1,000,000 acres of restoration activities over approximately 10 years or until objectives are met. The restoration activities listed for Alternative 2 include vegetation treatments (mechanical thinning and burning) as well as comprehensive restoration treatments (other restoration treatments) for grassland, aquatics, wildlife habitat, and rare species restoration. Proposed activities for alternative 2 would include:

- Mechanically thin trees and/or implement prescribed fire up to 953,130 acres.
- Implement mechanical thinning and prescribed fire on approximately 517,950 acres including –
- Approximately 150,790 acres of intermediate thinning
- Approximately 71,280 acres of stand improvement
- Approximately 12,510 acres of single tree selection
- Approximately 283,370 acres of uneven-aged group selection
- Approximately 63,930 within ½ mile of non-FS lands with structures and critical infrastructure, including –
- Approximately 16,970 acres of intermediate thinning
- Approximately 8,560 acres of stand improvement
- Approximately 38,390 acres of uneven-aged group selection
- Implement prescribed fire alone on approximately 54,070 acres.
- Mechanically thin and/or implement prescribed fire on approximately 82,280 acres of Mexican spotted owl (MSO) protected activity centers (PACs) including --
- Approximately 23,550 acres of mechanical thinning and/or prescribed fire
- Approximately 58,730 acres of prescribed fire only
- Approximately 7,180 acres of facilitative operations
- Mechanically thin and/or implement prescribed fire on approximately 25,290 acres of MSO replacement nest/roost recovery habitat.
- Conduct facilitative operations in non-target cover types to support treatments in target cover types, including –
- Approximately 123,400 acres of facilitative thinning and prescribed fire
- Approximately 1,260 acres of facilitative prescribed fire only
- Approximately 6,880 acres of facilitative prescribed fire only in PACs
- Approximately 300 acres of facilitative thinning and prescribed fire in

PACs
    - Restore aspen on approximately 1,230 acres, including about 30 acres in PACs.
    - Restore approximately 132,340 acres that have experienced severe disturbance, including about 3,610 acres in PACs.
    - Restore approximately 18,570 acres of savanna.
    - Restore approximately 36,320 acres of grassland, including –
    - Maintaining or restoring montane meadow connectivity in pronghorn corridors.
    - Restore hydrologic function and vegetation on approximately 6,720 acres of meadows.
    - Restore approximately 14,560 acres of riparian areas for aquatic stream habitat.

- Restore approximately 184 springs.
- Restore function and habitat in up to 777 miles of streams, including stream reaches with habitat for threatened, endangered, and sensitive aquatic species.
- Decommission up to 200 miles of existing system roads on the Coconino and Apache-Sitgreaves NFs, and up to 290 miles on the Tonto NF.
- Decommission up to 800 miles of unauthorized roads on the Apache-Sitgreaves, Coconino, and Tonto NFs.
- Construct or improve approximately 330 miles of new temporary roads or existing non-system roads to facilitate mechanical treatments; decommission all temporary roads when restoration treatments are completed.
- Relocate and reconstruct existing open roads adversely affecting water quality and natural resources, or of concern to human safety.
- Construct up to 200 miles of protective barriers around springs, aspen, native willows, and big-tooth maples, as needed for restoration.

Alternative 3 – Focused Alternative

This alternative is designed to focus restoration treatments in areas that are the most highly departed from the natural range of variation (NRV) of ecological conditions, and/or that put communities at risk from undesirable fire behavior and effects. High value assets will be better protected and burn boundaries will be designed to create conditions safe for personnel and to ensure fire can meet objectives. Treatment areas would be chosen to optimize ecological restoration, those areas that are most important to treat and can be moved the furthest toward desired conditions. Focusing on the higher priority ecological restoration will result in fewer acres being treated.

The restoration treatments proposed in Alternative 3 will be used to address moderate and high levels of mistletoe infection, but to a lesser extent on the fewer acres proposed for mechanical treatment and fire. The presence of dwarf mistletoe will not be used to prioritize areas for treatment, but it will be addressed where it exists, using the same types of treatments as Alternative 2. Design features will be developed to focus activity on addressing dwarf mistletoe infestations during implementation of mechanical treatments.

Alternative 3 responds to the Smoke/Air Quality, Economics, Roads, and Dwarf Mistletoe Mitigation issues. The restoration activities listed for Alternative 3 include vegetation treatments (mechanical thinning and burning), using the Flexible Toolbox Approach for Mechanical Treatments (see Appendix

D); as well as the same comprehensive restoration treatments as proposed in Alternative 2 for grassland and meadows, springs, streams, riparian habitat, using the Flexible Toolbox Approach for Aquatic and Watershed Restoration Activities (see Appendix D), wildlife habitat, and rare species restoration. Proposed activities include:

- Mechanically thin trees and/or implement prescribed fire on up to 529,060 acres.
- Implement mechanical thinning and prescribed fire on approximately 311,800 acres including –
- Approximately 112,090 acres of intermediate thinning
- Approximately 37,300 acres of stand improvement
- Approximately 5,630 acres of single tree selection
- Approximately 156,780 acres of uneven-aged group selection
- Approximately 46,260 within ½ mile of non-FS lands with structures and critical infrastructure, including –
- Approximately 16,970 acres of intermediate thinning
- Approximately 14,040 acres of stand improvement
- Approximately 27,200 acres of uneven-aged group selection
- Implement prescribed fire alone on approximately 40,630 acres.
- Mechanically thin and/or implement prescribed fire on approximately 61,700 acres of Mexican spotted owl (MSO) protected activity centers (PACs) including --
- Approximately 19,650 acres of mechanical thinning and/or prescribed fire
- Approximately 42,050 acres of prescribed fire only
- Approximately 3,370 acres of facilitative operations
- Mechanically thin and/or implement prescribed fire on approximately 19,590 acres of MSO replacement nest/roost recovery habitat.
- Conduct facilitative operations in non-target cover types to support treatments in target cover types, including –
- Approximately 47,580 acres of facilitative thinning and prescribed fire
- Approximately 630 acres of facilitative prescribed fire only
- Approximately 3,070 acres of facilitative prescribed fire only in PACs
- Approximately 300 acres of facilitative thinning and prescribed fire in PACs
- Restore aspen on approximately 1,010 acres, including about 30 acres in PACs.
- Restore approximately 31,750 acres that have experienced severe disturbance, including about 1,420 acres in PACs.
- Restore approximately 2,470 acres of savanna.
- Restore approximately 36,320 acres of grassland, including –
- Maintaining or restoring montane meadow connectivity in pronghorn corridors.
- Restore hydrologic function and vegetation on approximately 6,720 acres of meadows.
- Restore approximately up to 14,560 acres of riparian areas for aquatic stream habitat.

- Restore approximately 184 springs.
- Restore function and habitat in up to 777 miles of streams, including stream reaches with habitat for threatened, endangered, and sensitive aquatic species.
- Decommission up to 200 miles of existing system roads on the Coconino and Apache-Sitgreaves NFs, and up to 290 miles on the Tonto NF.
- Decommission up to 800 miles of unauthorized roads on the Apache-Sitgreaves, Coconino, and Tonto NFs.
- Construct or improve approximately 170 miles of new temporary roads or existing non-system roads to facilitate mechanical treatments; decommission all temporary roads when restoration treatments are completed.
- Relocate and reconstruct existing open roads adversely affecting water quality and natural resources, or of concern to human safety.
- Construct up to 200 miles of protective barriers around springs, aspen, native willows, and big-tooth maples, as needed for restoration.

Mitigation Measures/Design Criteria

Design criteria for each resource were developed to eliminate or reduce adverse effects of the proposed actions on sensitive scenic resources. These design criteria are part of the proposed action alternative and include features required in order to comply with the Coconino, Apache-Sitgreaves and Kaibab forest plans. Site specific conditions may result in some variation in application of the design criteria. However, the overall effects of all actions must comply with forest plan requirements. In addition to these design criteria, BMPs from the Soil and Water Conservation Handbook (2509.22) apply. Recreation and scenery mitigation measures/design features were jointly developed and adapted from the 1st 4FRI project. These measures apply to all scenery management situations and will be incorporated into the implementation plan. The following design criteria apply to all scenery management situations including but not limited to restoration activities, trails, roads, landings, in-woods processing sites and rock pits and will be incorporated into the implementation plan. Refer to Appendix C for all project design features.

Table 4 Design Features, Best Management Practices, and Mitigation

Design Feature	Description	Forest Plan Compliance	Specialist Recommendation	Purpose
RS002	Historic trails, roads and trail markers in the project area will be protected during project implementation in accordance with timber sale contract provision BT6.221, and BT6.22 (protection of improvements not owned by the forest service and those owned by the forest service	X	X	Regulatory requirement. Compliance with NHPA and Southwestern Region PA with AZ SHPO, National Recreational Trails

Design Feature	Description	Forest Plan Compliance	Specialist Recommendation	Purpose
	respectively). Additionally, the General Crook Trail, the Arizona Trail, the Highline Trail, and other historic trails, roads and National Recreation Trails will maintain historic and scenic integrity during project implementation.			compliance, National Historic Trails compliance and National Scenic Trails in compliance with the National Trails System Act.
RS004	Fire Control Lines: (a) Fire holding lines would be constructed, where ever possible, to reduce the contrast so that they are not noticeable in the middle and background views. Generally restore control lines to a near undisturbed condition in the foregrounds (within 300 feet) of sensitive roads, trails, developed recreation sites and private property. Avoid constructing fire holding lines within the AZT unless no other viable alternatives exist, and follow all requirements for areas with high scenic integrity objectives. If the Arizona Trail must be used as a holding line, both sides of the trail would be treated – a lateral distance to be determined by a scenery specialist. .; (b) Rehabilitate containment lines by rolling back the soil berm formed during line construction and constructing drainage features as necessary to prevent concentration of runoff. Disguise containment lines to line of sight or first 300 feet, whichever is greater; (c) To hasten recovery and help eliminate unauthorized motorized and nonmotorized use of control lines in these areas, use measures such as recontouring, pulling	X	X	Resource Protection

Design Feature	Description	Forest Plan Compliance	Specialist Recommendation	Purpose
	slash and rocks across the line, and disguising entrances, and (d) Do not use motorized equipment on national scenic, historic and recreation trails, or other forest system trails if these are used for control lines. Control lines however should be avoided on these trails under any circumstances unless the trails are co-located on roads. Coordinate with the district recreation staff and the national trail administrator regarding use of national trails as control lines.			
RS005	Where new temporary roads intersect existing roads or trails, native materials such as logs, slash, and/or boulders would be placed along temporary road to line-of-sight or first 300', whichever is greater.	X	X	Reduce unauthorized use
RS006	Unit Marking: (a) Avoid using trails as boundaries. (b) Avoid abrupt changes between treatment units. (c) Where feasible strive to have the minimal marking of trees within the Arizona Trail, General Crook Trail, and Highline Trail corridors. (d) Utilize species designation where appropriate to minimize the amount of necessary marking. (e) Unit boundaries will be marked with water based paint. Mark on the side of trunk not seen from trails, roads and sensitive travel ways. (f) Use the below techniques suggested for edges of treatment units.	X		Scenic integrity

Design Feature	Description	Forest Plan Compliance	Specialist Recommendation	Purpose
	Edges of Individual Units: (a) Ensure that forest stand composition changes are textural, with small, natural openings and not symmetrical in shape. Avoid straight lines and right angles. Ensure that openings resemble the form, line, and texture of those found in the surrounding natural landscape with edges feathered to avoid a shadowing effect. (b) where treatment unit is adjacent to denser forest (treated or untreated), the percent of thinning within the transition zone (150–250 feet) would be progressively reduced toward denser edges of the unit; (c) where treatment unit interfaces with an opening (including savanna and grassland treatments, and natural openings) the transition zone would progressively increase toward open edges of the unit; (d) soften edges by thinning adjacent to the existing unit boundaries. Treat up to edges; do not leave a screen of trees. Favor groups of trees complying with prescribed treatments that minimize visibility of treatment activities and visually connect with the unit's edge to avoid an abrupt and noticeable change. When feasible, treat both sides of open system roads and trails to avoid contrast.; (e) treatment boundaries should extend up and over ridgelines to avoid "mohawk" look; and (f) the ridgeline silhouette should have a textural effect of small, natural-appearing openings rather			

Design Feature	Description	Forest Plan Compliance	Specialist Recommendation	Purpose
	than large, thinned areas and unnatural-appearing breaks (g) Minimize mechanized treatments within ¼ mile of the Arizona Trail, General Crook Trail, and Highline Trail corridors . Where mechanized treatments are authorized, restore visual evidence of mechanized treatment activity within ¼ mile of the trails in order to promote a naturally appearing setting. (h) Implementation will comply with the nature and purpose of the Arizona National Scenic Trail. The Forest Service will meet annually with the Arizona Trail Association to discuss and document monitoring activities. (i) Ensure a landscape architect or recreation specialist with knowledge of scenery management is involved in implementation planning, initial layout strategy and mechanical treatment design.			
RS007	When possible, new fuelwood piles, and fuelwood skid trails should be located out of view in areas of High Scenic Integrity to avoid observation of bare mineral soil. Rehabilitate fuelwood skid trails, fuelwood piles, or other disturbed areas by restoring the original contours, fine grading, and seeding with native seed mix. Skidding activities and fuel piles would avoid National and forest system trails, except where motorized use is already authorized (trails located on open system and administrative roads). If it is determined necessary that a trail must be used as a skid trail crossing, make perpendicular trail crossings. Trail crossing	X	X	Avoid degrading recreation setting and resource protection

Design Feature	Description	Forest Plan Compliance	Specialist Recommendation	Purpose
	locations, including those on the Arizona National Scenic Trail and the General Crook and Highline National Recreation Trails would be designated and flagged with input from the District Trails Specialist, Recreation Planner or Archaeologist. The trail would be restored to USFS standards (pre-project condition) following treatment.			
RS008	Mechanical thinning operations shall not damage cairns or markers.	X	X	Resource protection and avoid substantial interference with the nature and purposes of the trail. (in compliance with Section 7 (c) of the National Trails System Act).
RS009	If trails are temporarily closed due to thinning, trails shall be returned to pre-treatment conditions.	X	X	Resource protection
RS010	Temporary Road, Skid Trail, Landing, and In-Woods Processing Site Construction: (a) Utilize dust abatement methods for hauling during the season when dust is likely and funding is available. Coordinate with the appropriate county on the application and timing of application of dust abatement on road segments that have county maintenance responsibilities. (b) Blend temporary roads and skid trails into the characteristic landscape of the surrounding area. Create cut and fill banks to be sloped to accommodate	X	X	Resource protection and scenic integrity and avoid substantial interference with the nature and purposes of the trail. (in compliance with Section 7 (c) of the National Trails System Act).

Design Feature	Description	Forest Plan Compliance	Specialist Recommendation	Purpose
	natural revegetation and to reduce sharp contrasts viewed from any distance. Where new temporary roads and skid trails meet a primary travel route, they should intersect at a right angle and, where practicable, curve after the junction, to minimize the length of route seem from the primary travel route. (c) Shape and/or feather the edges of log landings and in-woods processing sites to avoid abrupt changes between treated and untreated areas. Standing trees and shrubs around in-woods processing sites and landings shall be left in strategic locations to serve as screening in sensitive viewsheds. (d) In-woods processing sites, landings, temporary roads, and skid trails should be located out of view of CL1 and CL2 travel routes and wild and scenic rivers, to avoid observation of management activities. Do not locate perpendicular to roads or trails, rather set off at an angle whenever possible. When avoiding these locations is not possible, the evidence of management activities should be restored in a timely manner per (f). (e) In woods processing sites, landings, temporary roads, and skid trails should be minimized within sensitive viewsheds, such as those within eligible or suitable wild and scenic river corridors or next to developed recreation sites, private homes, or communities, and along paved and passenger car level roads and trails;			

Design Feature	Description	Forest Plan Compliance	Specialist Recommendation	Purpose
	(f) Highest emphasis for slash treatment, temporary road closures and road decommissioning will be placed on eligible or suitable wild and scenic river corridors and national scenic trail corridors; foreground (up to 300 feet) of developed recreation sites, private homes or communities; and Concern Level 1 roads (paved roads and passenger car roads) and trails, especially those designated as national scenic, historic, or recreation trails. (g) All constructed features including but not limited to fencing, office trailers, sanitation facilities, fuel storage containers, or temporary structures shall be designed to blend with the surrounding environment. Color of proposed above-ground features shall be non-reflective and treated to be Forest Service brown or for a rusty appearance, or as approved by a FS landscape architect or other FS official. (h) In-woods processing sites, landings, skid trails, and temporary roads will be rehabilitated, including restoring proper drainage and reseeding as needed with native species. (i) To hasten recovery and help eliminate unauthorized motorized and non-motorized use of skid trails and temporary roads, use physical measures such as re-contouring, pulling slash and rocks across the line, placing cull logs perpendicular to the route, and disguising entrances;. (j) Avoid using FS designated trails as skid trails or for temporary roads.			

Design Feature	Description	Forest Plan Compliance	Specialist Recommendation	Purpose
	(k) National Scenic, Historic, and Recreation Trails as well as forest system trails (motorized and non-motorized) will not be used for temporary roads or skid trails. It is acceptable to make perpendicular trail crossings. The locations of crossings will be designated. Trail crossings will be restored to pre-project condition after use. (l) Crossing of the Arizona Trail will be done sparingly and only if no other alternative exists. These crossing locations will be coordinated with District Recreation Staff and the national trail administrator.			
RS011	Cull Logs, Stump Heights, and Slash Treatments: (a) Cull logs would not be abandoned on landings. Use cull logs for closing temporary roads and decommissioning roads. Cull logs may also be suitable to use as down woody material, but must be scattered away from the landings. (b) Stump heights should be cut as low as possible. Flush cut or low cut stumps horizontally to 6" (on the uphill side) within immediate foreground (300 feet) of roads, trails, developed recreation sides and private property. Flush cut or low cut to 8" in other distance zones where topography and operational safety allows, with 12-inch heights as the exception and rarely occurring. (c) Slash should be removed, burned, or otherwise treated to return the area to its pre-implementation condition in the	X	X	Maintain Scenic Integrity and avoid substantial interference with the nature and purposes of the trail. (in compliance with Section 7 (c) of the National Trails System Act).

Design Feature	Description	Forest Plan Compliance	Specialist Recommendation	Purpose
	immediate foreground of sensitive places (e.g., in corridors of eligible or suitable wild and scenic rivers; within 300 feet of the centerline of Concern Level 1 roads, or national trails and sensitive trails; or 300 feet from the boundary of a recreation site or private land/communities). Where whole tree thinning occurs, machine piling may occur toward the back of landings. Prioritize slash burning in these locations within one year or as soon as possible after treatment. If conventional thinning practices are used and trees are delimbed and topped in the forest, machine-piled slash should be placed outside of eligible or suitable wild and scenic river corridors and at least 300 feet away from the centerline of roads, national trails, and sensitive trails; developed recreation sites; or private land/communities. In these instances, piles should be burned as soon as possible or within 1 - 3 years. After burning is complete, burn sites that are visible from roads, trails, developed sites, or private dwellings will be covered with natural duff to a minimum of 3 inches to minimize visibility of the burned area. In areas where burning will not occur until after 2 growing seasons: Remove slash within 300 feet from sensitive areas. If scattering is required, scatter slash to 18" or less in depth. Root wads and other debris in sensitive foreground areas and in wild and scenic river corridors would be removed, burned, or chipped. Outside of these areas, it is acceptable to			

Design Feature	Description	Forest Plan Compliance	Specialist Recommendation	Purpose
	scatter root wads and debris or use them to help close temporary roads or skid trails.			
RS012	Coordinate with designated Forest Service representative prior to implementing jackstraw, spring, and road restoration treatments. Do not implement jackstraw treatments within 1,000 feet of National Trails.	X	X	Maintain scenic integrity.
RS013	In semi-primitive non-motorized recreation opportunity spectrum classes specifically (occurring on about 13 percent of the project area), in eligible or suitable wild and scenic river corridors, and in inventoried roadless areas (IRAs): (a) Temporary roads should not generally be built (also see RS023). If they are used, they would be restored to pre-treatment conditions when projects are completed; (b) Strive to make stump heights 6 inches above ground (uphill side) or lower, with 12-inch heights the exception and rarely occurring; (c) Slash must be treated or removed in these areas; and (d) Use existing barriers (roads) and natural barriers as control lines whenever possible.	X	X	Protection of visitor experience
RS014	Recreation Sites: (a) Proposed mechanical treatments and prescribed fire adjacent to developed recreation sites must be reviewed and approved by the district ranger. Work with the district recreation staff to determine boundaries or no treatment zones around constructed features that need to	X	X	Protection of visitor experience

Design Feature	Description	Forest Plan Compliance	Specialist Recommendation	Purpose
	be protected in campgrounds. Treatments around the perimeter of campgrounds are encouraged. The timing of treatments must be worked out with districts. Treatments would generally avoid summer. Activity slash must be piled in agreed upon locations, and treated as soon as possible. If campgrounds remain open into fall and winter, provide information about upcoming closures and management activities onsite, at FS offices, and on FS Web sites.			
RS016	When mechanical treatment and/or burning are occurring along open trails that are not National Recreation Trails, slash will be pulled back immediately within 100 feet of the centerline of the trail corridor within specified timeframes (coordinate with recreation specialist).	X	X	Maintain Scenic Integrity
RS017	Retain healthy, large diameter, or character trees that have unique shape or form along all trails in a manner that results in stable, wind-firm residuals that are seen within ¼ mile of the trail.. Avoid lines of trees; strive to achieve a grouped appearance to avoid abrupt changes in the landscape character along the trail corridor.	X	X	Protect visitor experience
RS018	(a) Prior to blasting activities, nearby landowners or other permitted Forest users near the blasting location would be notified. (b) Standing trees and shrubs would be left in strategic locations along the perimeter of active rock pits to serve as screening to sensitive viewsheds.	X	X	Resource Protection

Design Feature	Description	Forest Plan Compliance	Specialist Recommendation	Purpose
RS021	Material extraction activities should not be permitted in designated or recommended special areas or Chevelon Canyon.	X		To protect the unique character of these areas.
RS022	All restoration activities within eligible or suitable wild and scenic river corridors will be designed to protect or enhance the free-flowing character and outstandingly remarkable values (ORVs) of rivers, and to maintain the rivers' current inventoried classifications (wild, scenic, or recreational), unless a suitability study is completed that recommends management for a less restrictive classification. This includes the management of fire, which should be carried out using minimum impact suppression tactics, or other tactics appropriate for the protection of identified ORVs.	X		To protect eligible and suitable wild and scenic rivers
RS023	Restoration activities within the corridors of eligible or suitable wild river segments on the Apache-Sitgreaves National Forests will not include any tree cutting.	X		To protect the primitive character of eligible or suitable rivers classified as wild
RS024	Temporary roads will not be constructed within inventoried roadless areas (IRAs) or within the corridors of eligible or suitable river segments classified as wild. Within corridors of eligible or suitable river segments classified as scenic, avoid constructing long stretches of conspicuous temporary roads paralleling the riverbank.	X		To ensure that wild river segments and IRAs maintain their primitive characteristics and to protect the largely undeveloped character of scenic river segments

Analysis Topics

The analysis topics covered in questions 1-3 are the scenery indicators that identify and measure scenic quality (Scenery Management System, Appendix J, NFMA/Forest Plan)

1. To what degree will the proposed restoration activities affect the scenic integrity of the project area?
2. Will visual disturbances detract from the natural appearance or be outside of the natural range of variability?
3. Will the proposed restoration activities sustain the valued scenic character and its scenery attributes through time?

Analysis questions 4 and 5 are related to Key Issues from the 1st 4FRI Scoping/Public Involvement

1. In what ways would prescribed burning smoke affect the scenery?
2. Are large, mature trees retained as part of the scenic character?

Assumptions and Methodology

Assumptions

- The Scenery Management System terminology will be used in the tables, maps and the environmental consequences section of this report to more clearly describe effects.
- Treatment location, in relation to terrain and elevation and other vegetative screening, can affect the visibility of management activities. Vegetation treatment on steep slopes, when other landforms do not block the view, can dominate the landscape.
- The duration of view or speed of travel through an area (i.e., walking or riding in a vehicle), determine how long a viewer has to study and pick out objects, forms, lines, colors, and patterns in the landscape.
- How well treatments transition from treated to untreated areas can also affect how evident a treatment is in all distance zones.
- Proposed activities, although they may have some short-term negative effects on scenery, also may begin to move the landscape toward the desired landscape character. Effects that would move the vegetation toward the desired landscape character are beneficial to scenic resources in the long term. These beneficial effects are often realized over a long period of time but lead to the lasting sustainability of valued scenery attributes. For example, tree thinning may have short-term effects of ground disturbance, stumps, and slash, but in the long term, if properly mitigated for scenery, may provide visual access into the forest and promote large tree growth and a smooth herbaceous ground cover. In the long-term, the removal of some trees, dependent on scale and intensity of treatment, may be a beneficial effect for scenery.
- Desired landscape character often includes and is linked to preferred visual settings. Gobster (1994) summarizes visually preferred settings as having four common attributes: large trees; smooth, herbaceous ground cover; an open midstory canopy with high visual penetration; and vistas with distant views and high topographic relief.

- Visual access, or how far one can see into a forest, is also a preferred scenic setting (Ryan 2005). The degree of visual access varies throughout the project area, depending on the amount of understory vegetation present in the forest. Younger ponderosa pine forests may have dense vegetation, which allows very little visual access into the forest. In the long term, scenic resources will have higher scenic quality if visual access is achieved or enhanced.

Methodology

ArcMap and GIS data layers were used to analyze the proposed activities in regards to recreation use, sensitive travel corridor locations, potential seen areas from sensitive travel corridors and use areas, and visual quality objectives and scenic integrity objectives assigned to the area. The potential effects on scenic resources from this project were determined based on a site visit to the project area with the members of the interdisciplinary team, review of photos of the project area, use and interpretation of GIS data and aerial imagery, and review of research and analysis of similar projects including the 1st 4FRI project analysis and scenic resource report.

This analysis applies current National Forest Scenery Management methodology in conjunction with existing Coconino, Apache-Sitgreaves, and Tonto National Forest Land and Resource Management Plan (LRMP) direction. Integration of this scenery analysis assures the 4FRI Rim Country Project is consistent with scenery-related CNF, A-SNF, and TNF LRMP direction, USFS policies, and applicable elements of USFS Visual Management and Scenery Management systems. Refer to Appendix B of the SMS Handbook #701 for a complete list of references requiring Forest Service management of scenery and aesthetics (Forest Service 2000).

The 4FRI Rim Country project will help achieve the desired conditions for scenery as defined in the Coconino, Apache-Sitgreaves and Tonto National Forest LRMP. Direct, indirect and cumulative effects were considered in this analysis.

Visual Management System (VMS)

The Tonto National Forest (TNF) currently manages Scenic Resources through the application of the VMS. The VMS was adopted by the Forest Service in 1974. The culmination of the VMS were Visual Quality Objectives (VQOs) prescribed in the LRMP for all lands within TNF. Visual quality objectives provide the degree of acceptable alteration of the characteristic landscape and are also a measure of the degree to which a landscape is visually perceived to be complete. The VQO classifications range from Preservation, Retention, Partial Retention, Modification, to Maximum Modification.

Table 5. Scenic Integrity as described by VQO levels

Levels of Scenic Integrity/Disturbance (Visual Quality Objectives/VQOs)	The Forest's Scenic Integrity as people perceive it
Preservation	Unaltered, complete
Retention	Unnoticeably altered
Partial retention (most common level and objective for Big Pony sensitive views)	Slightly altered
Modification	Moderately altered
Maximum modification	Heavily altered
Unacceptable modification (is never an objective on National Forest Lands)	Unacceptably altered

For a full synopsis of each VQO see *National Forest Landscape Management: Volume 2, Chapter 1, The Visual Management System* (USDA-Forest Service 2000).

During analysis, it was recognized that the Tonto NF had data gaps present on a small percentage of Visual Quality Objective GIS polygons contained in the project area. For this report, an analysis using site visit information, photos, GIS and Google Earth was conducted to complete the missing VQO data.

The TNF LRMP will be transitioning in the future to Scenery Management System (see next section). For this project, the current Visual Management System is used to ensure TNF plan consistency and compliance; however, the Scenery Management System terminology will be used in tables, maps and the environmental consequences section of this report to more clearly describe effects and for consistency with the Coconino and Apache-Sitgreaves NF terminology. This action also follows Forest Service direction "*begin using the concepts and terms contained in this Handbook (Landscape Aesthetics, A Handbook for Scenery Management) as you work on new projects or initiate forest plan revisions"* (USDA-Forest Service 2000). See the Visual Quality Objective – Scenic Quality Objective transition table (Table 6) which provides a crosswalk between the two systems.

Scenery Management System (SMS)

The Scenery Management System (SMS) began with the basic premises established in the Visual Management System, but has been revised to better accommodate ecosystem management and the time frames and disturbance patterns of natural systems. This system places greater importance on identifying which scenic elements forest constituency most value, and developing management strategies to maintain or improve on those qualities. The Coconino NF and Apache-Sitgreaves NF LRMP are currently using SMS. Full adoption of the SMS is to occur as each National Forest revises its LRMP. For Forests not currently undergoing the LRMP revision process, or for those requiring extensive time for revision, application of the SMS will occur at the project level. This is the case for the Tonto NF which will be transitioning from VMS to SMS at a later date, but for consistency in this report the SMS terminology will be used in tables, maps and the environmental consequences section.

The eleven fundamental principles to the Scenery Management System are:

- Biological, physical and social factors create and influence scenery and interact to determine landscape character.
- Landscape character varies greatly with the interaction of environmental factors.
- People have the ability to perceive landscape character and develop expected images.
- Through various activities, people have the ability to modify landscape character and scenic conditions and have often done so.
- Such changes in landscape character and scenic condition often modify, suppress, or replace the original landscape character.
- People value most highly the more scenic landscapes.
- Generally, natural-appearing landscapes are the most valued.
- Resource managers can design their activities to reduce adverse effects on landscape character and scenic integrity.
- People have the ability to establish goals to maintain or create desired landscape character.

- People have the ability to apply ecological, technical, and design knowledge to meet scenery management goals and objectives.

- In some situations, resource managers perpetuate or create desired scenic environments to provide an improved quality of life.

The Scenic Integrity Objectives (SIOs) are used in the SMS in much the same way as VQOs are used in VMS. The Scenic Integrity or "intactness" of national forest lands is the means by which proposed alterations to the land are evaluated. Scenic Integrity is produced from the combined inventory of scenic attractiveness, viewing distance from the observer, and concern level of forest visitors. Scenic Integrity Objectives (SIO) are established for the forest and can be applied at the forest, management area or project area (USDA- Forest Service 2000). SIOs range from Very High, meaning the landscape character is unaltered, to Very Low, meaning the landscape character is highly altered. Intermediate levels include High (landscape character appears unaltered), Moderate (landscape character is slightly altered), and Low (landscape character is moderately altered). The SIO levels can be applied in two ways: (1) to describe a degree of existing Scenic Integrity/disturbance or (2) to describe a minimum objective for future integrity to be achieved. Another basic premise of the SMS is landscape character, which gives a geographic area its visual and cultural image. It consists of a combination of physical, biological and cultural attributes that make each landscape identifiable and unique. Landscape character embodies distinct landscape attributes that exist throughout an area (USDA-Forest Service 2000). Figure 2 below identifies the SIO of the Coconino, Apache-Sitgreaves National Forests and the VQO as previously described of the Tonto National Forest.

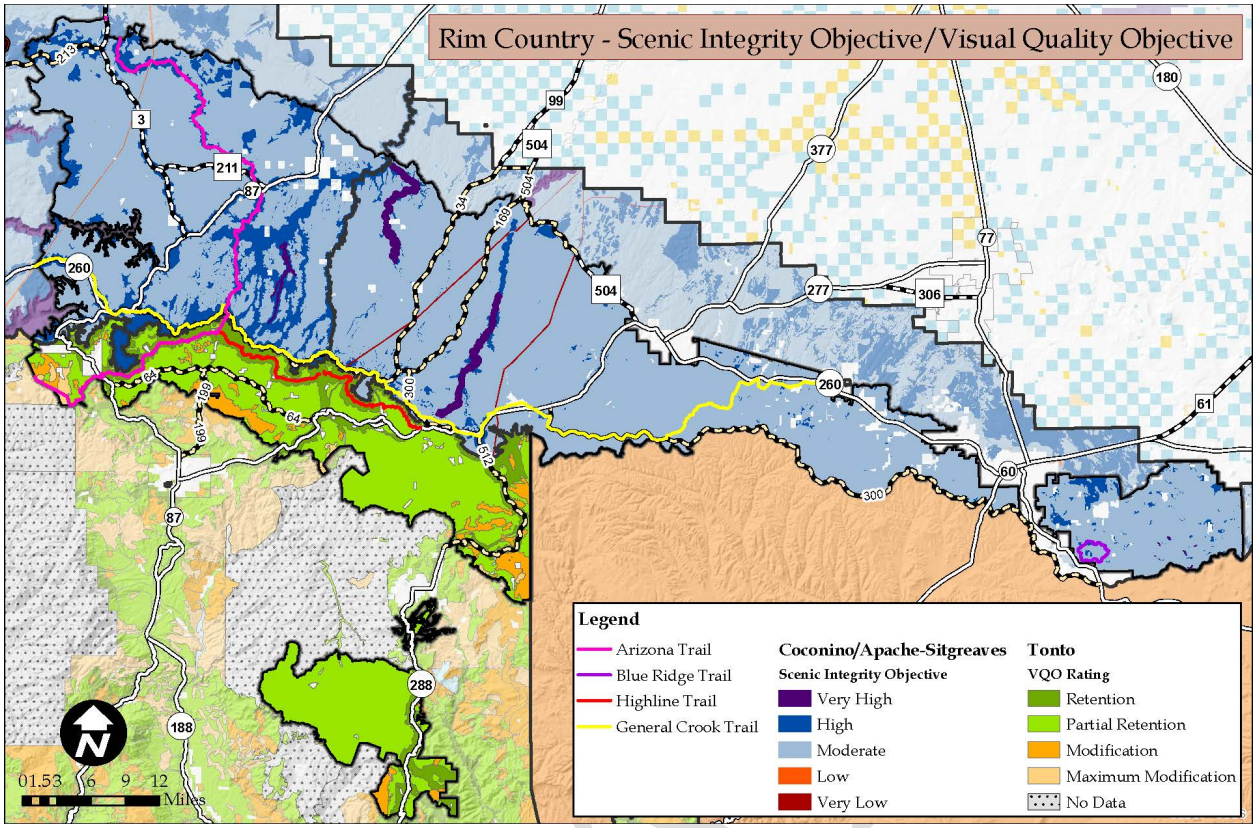

Figure 2. SIO and VQO Data for the project area

Table 6 below provides a crosswalk between the Visual Management System rankings and terminology with the Scenery Management System.

Table 6. The Visual Quality Objective -Scenic Integrity Objective Transition

Visual Quality Objective	Scenic Integrity Objective	The Forest's Scenic Integrity as people perceive it
Preservation	Very High	*Unaltered*-Valued landscape character "is" intact with only minute if any deviations. The existing landscape character and sense of place is expressed at the highest possible level.
Retention	High	*Appears unaltered*- Landscapes where the valued landscape character "appears" intact. Deviations may be present but must repeat the form, line color, texture, and pattern common to the landscape character so completely and at such scale that they are not evident.
Partial Retention	Moderate	*Appears Slightly Altered*- Noticeable deviations must remain visually subordinate to the landscape character being viewed.
Modification	Low	*Appears Moderately Altered*- Deviations begin to dominate the valued landscape character being viewed but they borrow valued attributes such as size, shape, edge effect and pattern of natural openings, vegetative type changes or architectural styles outside of the landscape being viewed.

Maximum Modification	Very Low	*Appears Highly Altered*- Deviations may strongly dominate the valued landscape character. They may not borrow from valued attributes such as size, shape, vegetative type changes or architectural styles within or outside of the landscape being viewed. However, deviations must be shaped and blended with the natural terrain (landforms) so that elements such as roads, and structures do not dominate the composition.

Desired Scenic Character

Desired scenic character (DSC) identifies the most aesthetically desirable set of valued and sustainable scenic character attributes as possible given the multiple land uses compatible with a particular landscape. Based on the purpose and need and proposed action, Table 7 below provides a comparison of existing condition, desired condition, and desired scenic character. The DSC is achievable through the project level activities proposed in this project in the long term. Since the activities required to move the project toward desired conditions are substantial in some areas, short term interim scenic integrity levels will be employed during the project.

The interim scenic integrity levels acceptable during implementation will follow the forest plan guidance that SIO in the treatment area may drop one level during project implementation in the short term, but must meet or exceed the mapped SIO in the long term. For example areas mapped with an SIO of high can move down to moderate in the short term, but must meet high SIO in the long term. Similarly if an area is mapped with an SIO of moderate, these areas can move down to low in the short term, but in the long term must meet moderate SIO.

Table 7. Comparison of existing conditions, project desired conditions and desired scenic character

Existing Condition	Desired Condition	Desired Scenic Character
Lack of recurring fire has resulted in proliferation of smaller trees that have reduced or replaced openings	Mosaic of openings and groups of trees that are maintained by low severity fire	Scattered groups of trees with grassy openings between that provide natural contrast and species diversity. A mosaic of openings and groups of trees allows existing scenic views and attributes to be seen.
Lack of age and size class diversity and trend toward even-aged structure	All size and age classes of trees present and trend toward un-even aged structure	Uneven aged groups of trees – all age and size classes present, but distributed across the landscape in groups and clumps. Different sizes and forms create variety and pattern across the landscape that is characteristic of the ponderosa pine forest and is the dominant visual element.
Reduced tree vigor and health leading to lack of resilience to drought and other extreme weather events, insect and disease, intense wildfire	Improved tree growth and vigor	Forest health is improved resulting in better resilience and forest structure. Scenic attributes are sustainable into the future.

Under representation of old , mature trees	Retention of existing old mature trees and improved tree growth and vigor to promote growth of future old aged trees	Large old mature trees are a prominent component of the uneven aged forest. The form and shape of large trees and presence of a mature forest structure is critical to the landscape character of the ponderosa pine type.
Small trees reduce or remove openings, reduced sunlight to the forest floor, little or no understory vegetation	Increased understory grass and forb production	Diversity of species and healthy understory vegetation is critical to the composition and attractiveness of forest settings. Diverse forest communities include trees, shrubs, grasses and forbs native to the area. The aesthetic experience of the ponderosa pine and pinyon- juniper forest increases when the species diversity includes both fine and coarse textures, patterns, scales and colors.
Vegetation diversity has declined	Gambel oak and aspen present, vigorous and sustainable	Gambel oak and aspen provide color, pattern and texture contrast to the coniferous forest and are important for fall color viewing. Color viewing pilgrimages are a traditional activity. Aspen and oak are more conspicuous since nearby conifer encroachment is reduced and overtopping trees are thinned.
Trees have encroached on grasslands and savannahs, and species have shifted to woody vegetation	Restore historical patterns of trees within grasslands and savannahs	Grasslands provide scenic diversity and are important components of Northern AZ forests for recreation and scenic views. They contrast with forested settings and different plant species (especially wildflowers) are present. These places were often homesteaded and have historic significance. They contribute to the sense of place. Savannahs also provide scenic diversity and a lesser degree of contrast to forested areas.
Fire regimes have shifted to lower frequency high severity surface and crown fires.	Reintroduce fire to the landscape by reducing the potential for crown fire and high severity surface fire and moving toward more frequent lower severity fires	Fire evidence is reintroduced as a natural element of the scenery in an irregular mosaic of burn patches and as maintenance burning occurs, with low to moderate burn severity. Burning is essential in order to re-establish scenic stability.
Riparian systems have shifted to closed canopies with openings filled with small and medium sized trees. Understory vegetation has been reduced.	Promote riparian vegetation and openings, and maintain or improve their scenic quality	Riparian systems are rare commodities on the forests and often receive heavy recreation use. They are a critical scenic feature since water is a scarce resource and the plant species are often dramatically different than those found in most locations. Riparian systems provide sounds, scenes and tactile experiences found only in these places.
Ephemeral channels have been degraded including heavy erosion with excessive bare ground, denuded vegetation and head cuts.	Restore channels to a functioning condition that promotes establishment of native vegetation and reduces sediment flows. Maintain or improve their scenic quality	Ephemeral channels provide scenic diversity and are important components of the forests. They contrast with forested settings and different plant species are often present. They provide important views and occasional or seasonal sounds and tactile experiences.

Scenic Integrity Objectives

Illustrated in Figure 3 are the scenic integrity objectives (SIO) for the project area (VQOs have been transitioned to SIOs as described previously in this report). For the 4FRI Rim Country Project, these SIOs

represent the long term goal for restoration, and are incorporated in the desired conditions for restoration activities proposed above. A majority of the project area is mapped as SIO Moderate where the landscape character “appears slightly altered.” The areas designated SIO High or Very High are generally located along sensitive scenic areas such as scenic roadways or highly traveled routes and along Eligible Wild and Scenic Rivers. There is also a small amount of SIO Low on the Tonto NF. Figure 4 illustrates the percentages of SIO for the project area.

According to the SMS Handbook (Forest Service 2000): Very High scenic integrity refers to an unaltered valued landscape character that "is" intact with only minute if any deviations. High scenic integrity refers to landscapes where the valued landscape character “appears” intact. Deviations may be present but must repeat the form, line, color, texture and pattern common to the landscape character so completely and at such a scale that they are not evident. Moderate scenic integrity refers to landscapes where the valued landscape character “appears slightly altered”. Noticeable deviations must remain visually subordinate to the landscape character being viewed. SIO low refers to landscapes where the valued landscape character “appears moderately altered”. Deviations begin to dominate the valued landscape character being viewed.

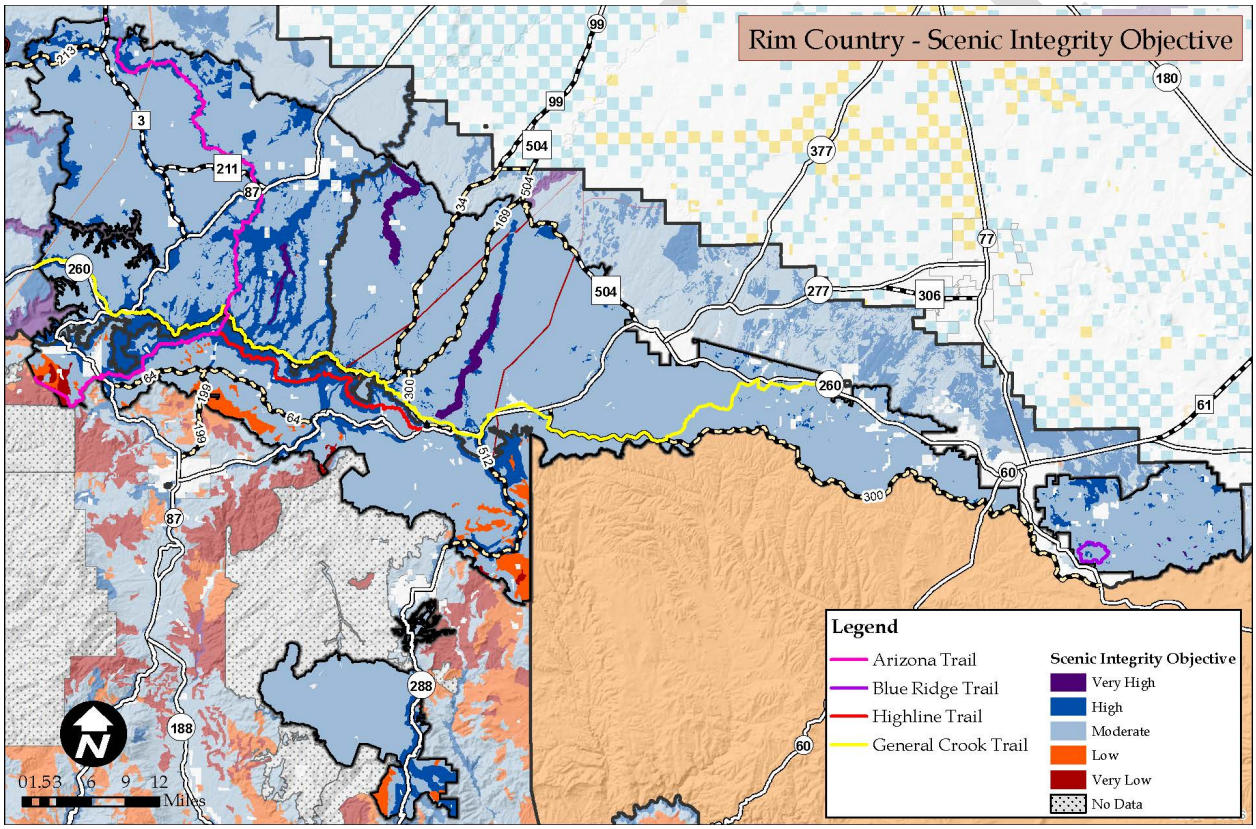

Figure 3. Scenic integrity objectives for the entire 4FRI project area

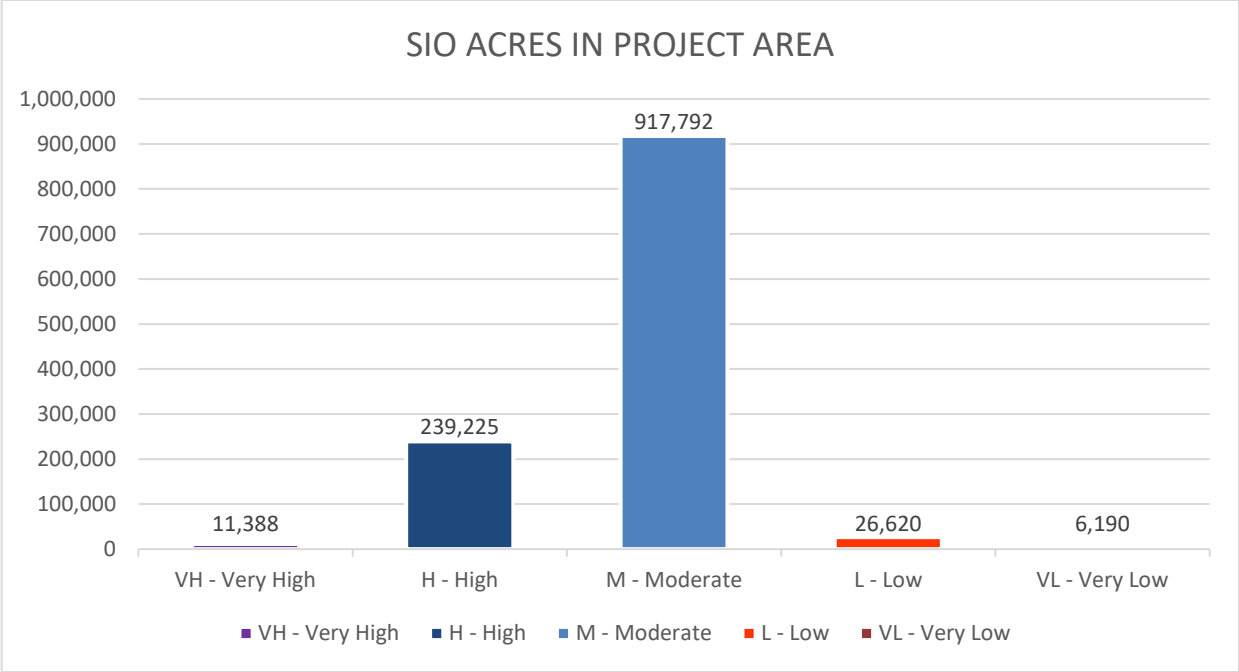

Table 8. SIO Acres in Project Area

Scenic Character Goals

In the SMS Handbook (USDA-Forest Service 2000) the scenic character goals are defined as management prescriptions designed to maintain or modify the existing scenic character to a desired future state, help meet desired conditions and Forest Plan objectives.

The scenic character goals for this project are:

- Retain and restore the "natural appearing" historical vegetation scenic attributes (structure, pattern, composition) throughout the project recognizing that in some places other values such as endangered or sensitive species requirements may take precedence.
- Restore areas of diminished scenic character.
- Increase scenic variety and ecological resiliency while moving vegetation conditions in the treatment area toward reference conditions.
- Maintain a more open forest canopy, large, mature trees, and greater diversity of species and sizes arranged in a clumpy, irregular distribution to provide better views into the canopy.
- Increase the health, resiliency and prominence of aspens, oaks, and grasslands within the open forest mosaic.
- Restore riparian areas near seeps and springs, and improve watershed function in ephemeral drainages so the scenic quality of these areas is enhanced and sustained.
- Reintroduce fire evidence with low to moderate severity burns.
- Retain large snags and downed woody material in a natural appearing condition.
- Decommission unauthorized routes and closed roads to improve the scenic character at these places.

These treatment activities will move the treatment area toward the long term standard of High and Moderate scenic integrity.

Spatial and Temporal Context for Effects Analysis

The spatial boundaries for analyzing the direct and indirect effects on scenery are National Forest System lands within the project area boundary because the proposed activities would only occur on National Forest System lands.

Short-term scenic effects of vegetation management are often the most noticeable until the growth of grasses, shrubs, and remaining trees begin to soften the effects of thinning operations. Short-term for this analysis refers to a three to five-year period after all vegetation treatments in an area are complete. Short-term effects are especially noticeable when the viewer has an up-close view of the treatment site usually in the foreground viewing distance.

Long-term effects, which for this analysis is considered beyond five years, vary by the treatment and the method used.

Past harvest of forested slopes is generally noticeable for 15 to 30 years depending on treatment prescriptions, soils, aspect, and vegetative species composition. At the end of this time period, the regrowth of vegetation begins to develop characteristics of a closed canopy and the area no longer appears altered. The cumulative effects analysis area is all lands, including other ownerships inside the 4FRI Rim Country project area boundary.

Affected Environment

Project Level Scenic Inventory

"Research has shown that high-quality scenery especially that related to natural-appearing forests enhances people's lives and benefits society…Research findings support the logic that scenic quality and naturalness of the landscape directly enhance human well-being, both physically and psychologically, and contribute to other important human benefits. Specifically these benefits include people's improved physiological well-being as an important by-product of viewing interesting and pleasant natural appearing landscapes with high scenic diversity." (Forest Service 2000). The affected environment section will first provide a general description of the Coconino, Apache-Sitgreaves and Tonto NF scenic resources, then discuss scenic integrity in the context of SMS.

The Apache-Sitgreaves, Coconino, and Tonto National Forests' natural, cultural, and historic resources provide diverse outdoor recreation opportunities that connect people with nature in a variety of settings. Forest users can hike, bike, drive motorized vehicles, camp, fish, view wildlife and scenery, and explore historic and prehistoric places. They enjoy opportunities for year-round recreation activities from birding and wild flower observing in the spring to hiking in summer months, fall color viewing and hunting, and cross country skiing in the winter. Figure 5 provides the locations of the developed recreation sites and the Recreation Opportunity Spectrum (ROS) which provides a framework for the types of recreation opportunities available within the project area. See the Recreation Specialist Report for a more detailed summary and analysis of developed recreation sites, Recreation Opportunity Spectrum classifications, and other recreation information specific to the Rim Country project area.

Figure 5. Rim Country Developed Recreation Sites and Recreation Opportunity Spectrum

For all three forests in the project area, the existing condition of scenic resources is a result of implementing the Land and Resource Management Plans. The management of multiple resources has, to varying degrees, altered the natural landscape character. The most obvious effects on scenic resources within the project area are from vegetation and landform alterations. Resource management activities which have altered scenic resources include but are not limited to vegetation management, mineral extraction, utility corridors, roads and trails, development of recreation sites such as campgrounds and picnic grounds, improvements associated with special use permitted sites, livestock grazing, and fire management (suppression and prescribed burning).

Sense of Place

Landscape character gives a geographic area it's visual and cultural image, and consists of the combination of physical, biological, and cultural attributes that make each landscape identifiable or unique. Existing landscape character may range from predominantly natural landscapes to those that are heavily culturally influenced.

The three forests have developed a recreation niche setting to provide general context for the importance of inherent scenic qualities that contribute to the landscape character. These qualities include aesthetic, social and biophysical features (see niche descriptions). Valued scenic assets and recreational opportunities in the project area include the Mogollon Rim, Eligible Wild and Scenic Rivers, lakes, National Recreation Trails (Arizona, General Crook, Highline), the visitor center and campgrounds at

Mogollon Rim in addition to other developed campgrounds, trailheads, trails, and dispersed recreation opportunities. Dispersed recreation opportunities include hunting, fishing, wildlife and bird watching, camping and many other activities. The scenic assets for recreation is included in the following locations in figure 6, figure 7, figure 8.

Niche information was developed for the Coconino NF and Apache-Sitgreaves NF. Four settings were identified: High Use, Scenic Corridor, Moderate Use/Dispersed, and Secluded/Low Use/Primitive Area. Wilderness is excluded from treatment in the 4FRI project and is represented in Low Use as well as in portions of moderate and high use areas.

- High Use/Developed - This setting includes activities such as interpretation and education, developed camping, scenic viewing and hiking. Visitors to the Forest commonly experience a seamless shift from community trails and roads onto the Forest, without recognizing the change. Developed recreation sites include campgrounds, picnic areas, interpretation sites and trailheads.

- Scenic Corridor – Visitors drive through the changing landscapes and view the spectacular scenery, by stopping at observation points they gain an understanding and appreciation for environmental ethics. Activities include interpretation and education, developed camping and viewing scenery. Developed recreation opportunities include campgrounds, picnic and day use areas, and trailheads.

- Moderate Use/Dispersed – This less structured setting includes a lot of the vast open space of the Forest. From sparse vegetation to dense forest, canyons to plateaus and mountains, this area typifies the Forest's contrasting landscapes. Activities in this area include OHV riding, hiking, and dispersed and developed camping. Developed recreation opportunities include boating, campgrounds, cabins and trailheads.

- Secluded/Low Use/Primitive Area – Remote areas offer solitude and unconfined recreation. The area's primeval character dominates and no permanent improvements exist. The Forest has wilderness areas, not all of which are in this setting. Activities in low-use areas include hiking and backpacking and site types with trailheads and information boards.

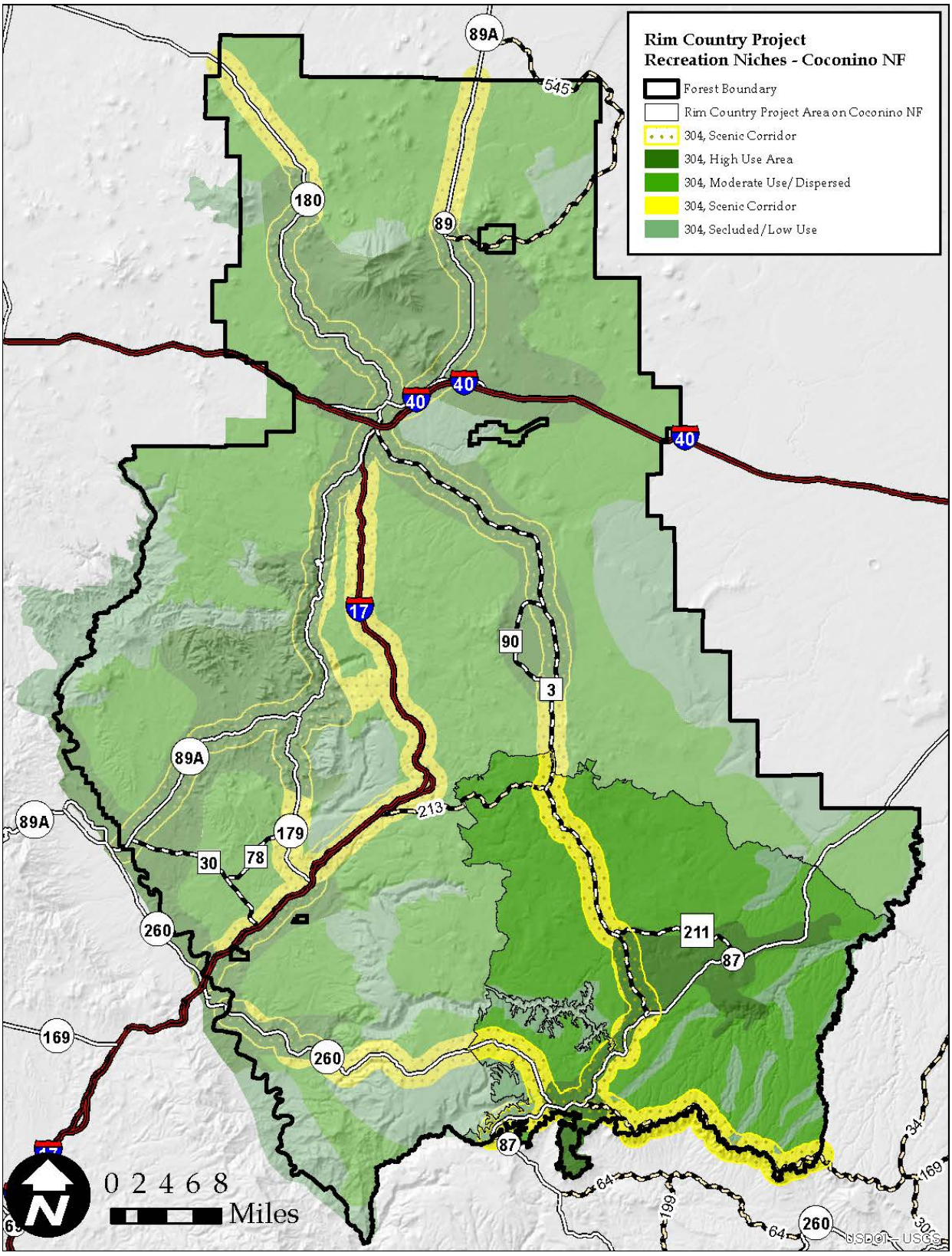

Figure 6. Coconino NF Recreation Niche Setting

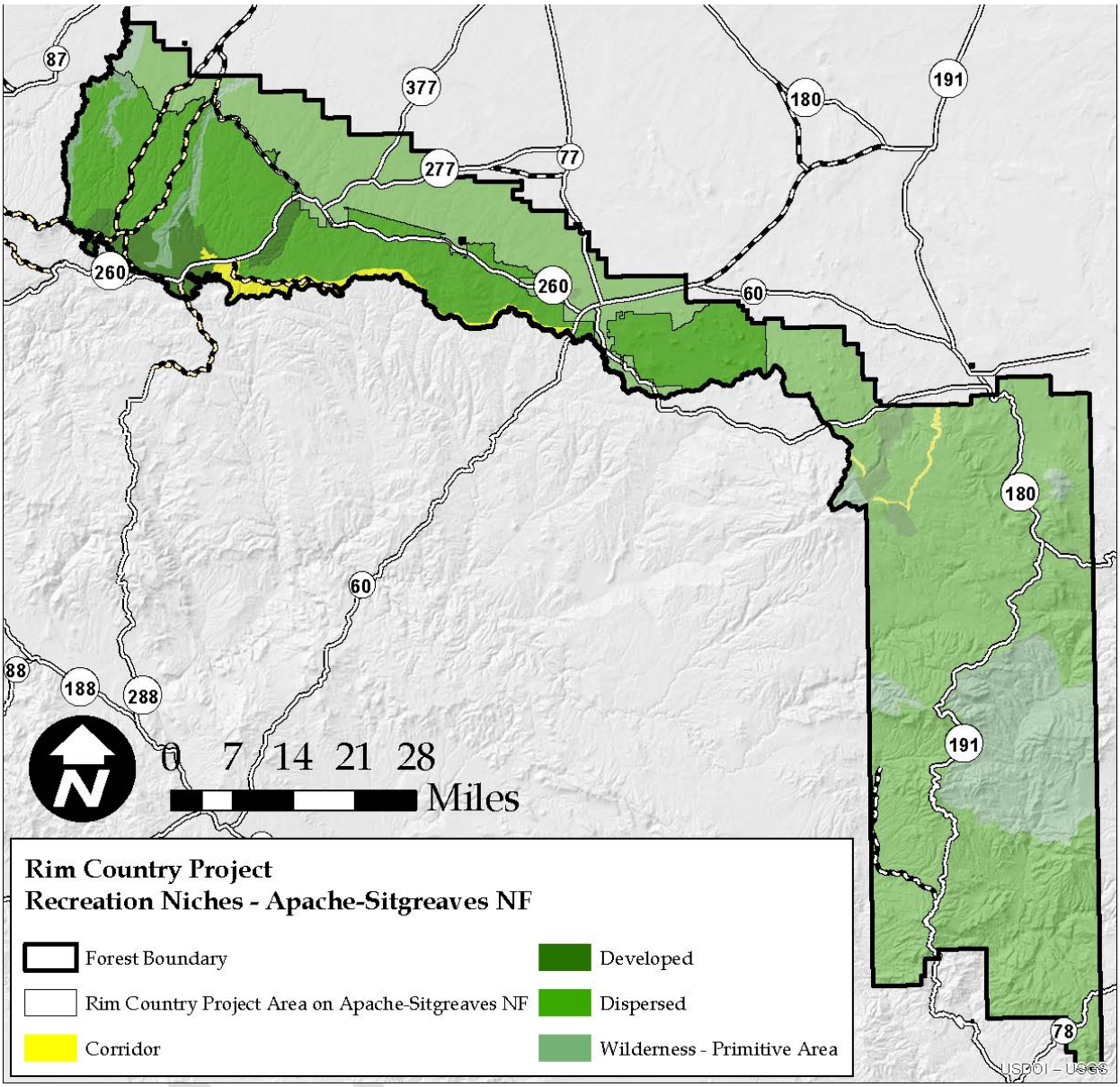

Figure 7. Apache-Sitgreaves NF Recreation Niche Setting

Similarly, niche information was developed for the Tonto NF. Six settings were identified, however, only three are represented in the project area (Figure 8). Backcountry, High Country, and Linear Adventures (e.g., hiking, biking). Wilderness is excluded from treatment in the 4FRI project as reflected in the recreation niche map.

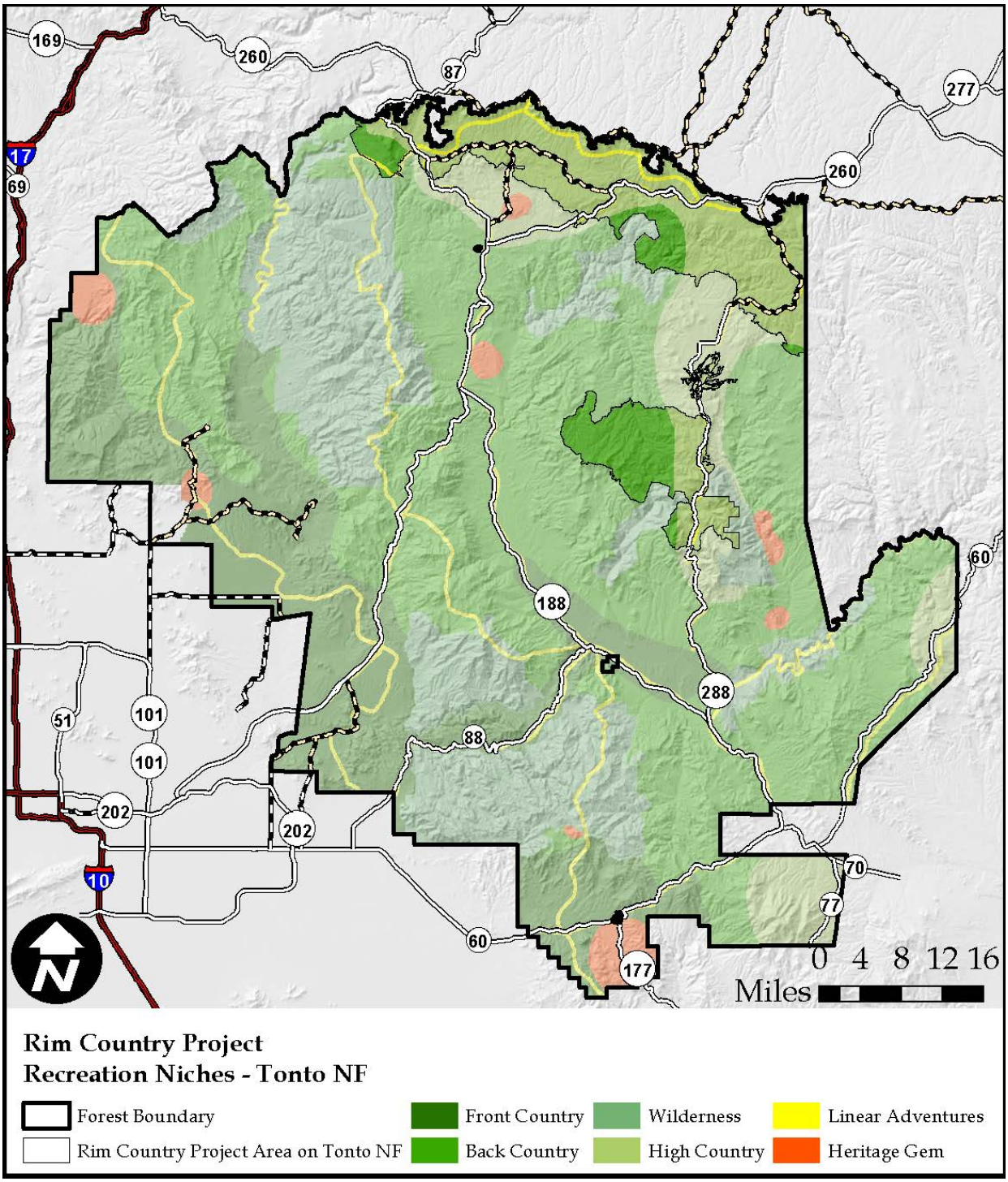

Figure 8. Tonto NF Recreation Niche Setting

Scenic Character Description

The 4FRI Rim Country project area includes land on the Mogollon Rim and Red Rock Ranger Districts of the Coconino NF, the Black Mesa and Lakeside Districts of the Apache-Sitgreaves NF, and the Payson and Pleasant Valley Districts of the Tonto NF, and includes portions of Coconino, Yavapai, Gila, and Navajo Counties. Major access routes include US Highways 87, 260, State Route 288, Roads 213, 3, 512

and From the Desert to the Tall Pines National Scenic Byway. These communities and routes receive high use and users have high concern for scenery.

The project area is viewed at foreground, middleground and background distances from sensitive roadways, trails, and recreation sites located within and around the boundary. See Figure 9 for definitions of landscape distance zones (Forest Service 2000).

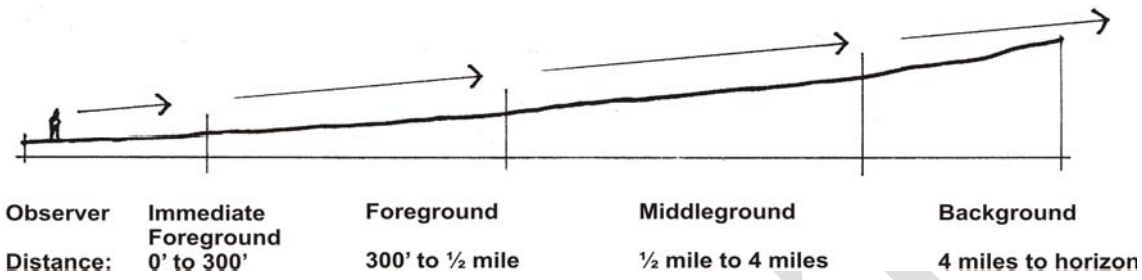

Figure 9. Landscape distance zones

The forested landscapes in the Rim Country project area are highly departed from desired conditions, lacking desired species composition, spatial arrangement, and structure, and are very dense as measured by basal area, trees per acre, and stand density index. Some of these areas are at high risk for disturbance from undesirable fire behavior, insects and disease, and climate change.

The project area's dominant scenic identity is the continuous ponderosa pine, ponderosa pine-Gambel oak, and ponderosa pine-evergreen oak forests interspersed with less dominant cover types.

Table 9 shows the cover types that occur in the Rim Country project area. For a detailed description of cover types and existing forest vegetation communities, please refer to the Silviculture Report.

Table 9. Vegetation Cover Types in the Project Area

Cover Type	Total Acres
Juniper	28,340
Pinyon Juniper Woodland	83,330
Ponderosa Pine*	316,660
Ponderosa Pine-Gambel Oak*	170,710
Cottonwood Group	3,200
Aspen	1,450
Oak Shrubland	17,980
Ponderosa Pine-Evergreen Oak*	146,340
Mixed Conifer-Dry*	62,940
Mixed Conifer-Wet	2,650
Grassland	21,550
Reforestation Needs	69,360
Other	27,810

*Target cover type: frequent-fire type targeted for restoration treatments.

The exclusion of fire has resulted in high canopy cover and high tree density which limits the amount of sunlight and precipitation reaching the ground. Consequently, understory vegetation is less diverse, sparse, and provides poorer quality food and cover for wildlife than under more open canopies.

The project area is valued for its open stands of ponderosa pine. Old-growth "yellow-belly" trees are an important component of the ponderosa pine forest. Forest aesthetic research has found that large mature trees and an open forest are important parts of scenic beauty and should be retained in the forest (Ryan 2005). The ponderosa pine and mixed conifer cover types vary from dense stands of smaller diameter trees to open stands of large, stately ponderosa. The mixed conifer stands provide scenic variety.

Figure 10. Example of Ponderosa pine character zone from Mogollon Rim

The 4FRI project includes about 28,000 acres of the pinyon-juniper cover type. Most of the pinyon-juniper vegetation communities are currently younger and denser than they were historically, because of changes in wildfire occurrence. Greater tree density has increased competition for water and nutrients. This, in turn, has caused a reduction in understory plant cover and diversity, a loss of ground cover, and subsequent increases in soil erosion (USDA-Forest Service 2012e).

Understory vegetation species include aspen, oak, and other species of shrubs, grasses, and forbs. Understory tree species are moderately scaled; most have pine trees that have encroached into groves/groups and are now overtop many of the deciduous trees. Aspen stands are currently in decline throughout most of the Southwest as a result of fire absence, unmanaged forest succession, drought, and ungulate over browsing (Forest Service 2012). Gambel oak is another important scenic species with characteristics of color, shape, texture and form that contrast with the dominant conifer species. The oaks are not as showy as aspen, but sport fall color changes, and large, mature trees can be striking. Gambel

oak is stressed by absence of fire, unmanaged forest succession, and drought and other extreme weather events.

In the meadows and grasslands of the Rim Country project area containing approximately 21,000 acres, conifers and junipers have encroached into these once open grassland habitats, decreasing the size and function of landscapes that were historically grasslands. As tree canopy increases, understory productivity decreases.

Figure 11. Examples of vegetation cover and understory in the Rim Country project area

The diversity of vegetation-related scenic attributes supports a positive viewing experience for people traveling through or recreating in the project area, and supports the quality of life for local residents and visitors (Ryan 2005). The diversity of vegetation also contributes to abundant wildlife also an important part of scenery viewing.

To the common visitor, the landscape is perceived as a predominantly natural-appearing landscape with some evidence of human modification and disturbance. There are recreation developments such as campgrounds, trailheads, interpretation areas, visitor centers, and historic Forest Service structures. Roads and trails built to accommodate timber harvest, grazing, and recreation use, are evident across the landscape. Natural disturbances have had an influence on the vegetation patterns. These disturbances include fire, storm, insect and disease events and recovery processes from these events.

There are a total of 728 miles of trails identified in the project area including four National trails. These trails offer unique recreational opportunities and an opportunity to experience the scenic quality of the project area. The following National Trails are located within the project area:

- The General Crook National Recreation Trail is a 138-mile-long historic route that was originally over 200 miles in length and connected Fort Whipple to Fort Apache. Portions of the trail are located on the Coconino and Apache-Sitgreaves National Forest. The trail follows the Mogollon Rim, one of

the more striking geologic features in Arizona, offering spectacular views of the states central mountains and desert. Approximately 95 miles of this trail are located in the project area.

- The Arizona National Scenic Trail is a continuous, 800+ mile diverse and scenic trail across Arizona from Mexico to Utah that crosses through the Coconino and Tonto National Forest. It links deserts, mountains, canyons, communities, and people. Approximately 70 miles of this trail are located in the project area. The total includes approximately 30 miles of segments that overlap with other trails in the project area.
- The Blue Ridge National Recreation Trail is a 9.4-mile loop trail located on the Apache-Sitgreaves National Forest that follows Billy Creek and winds its way through a Ponderosa pine forest to the top of Blue Ridge Mountain. The entire trail is within the project area.
- The Highline National Recreation Trail offers beautiful vistas of rim canyons, brushy hills and distant mountains, unique rock formations and wonderful stands of ponderosa pine. The Highline Trail runs essentially east to west, below the Mogollon Rim and roughly following it. Approximately 44 miles of this trail are located in the project area.

Figure 12 below illustrates the locations of the national trails in the project area.

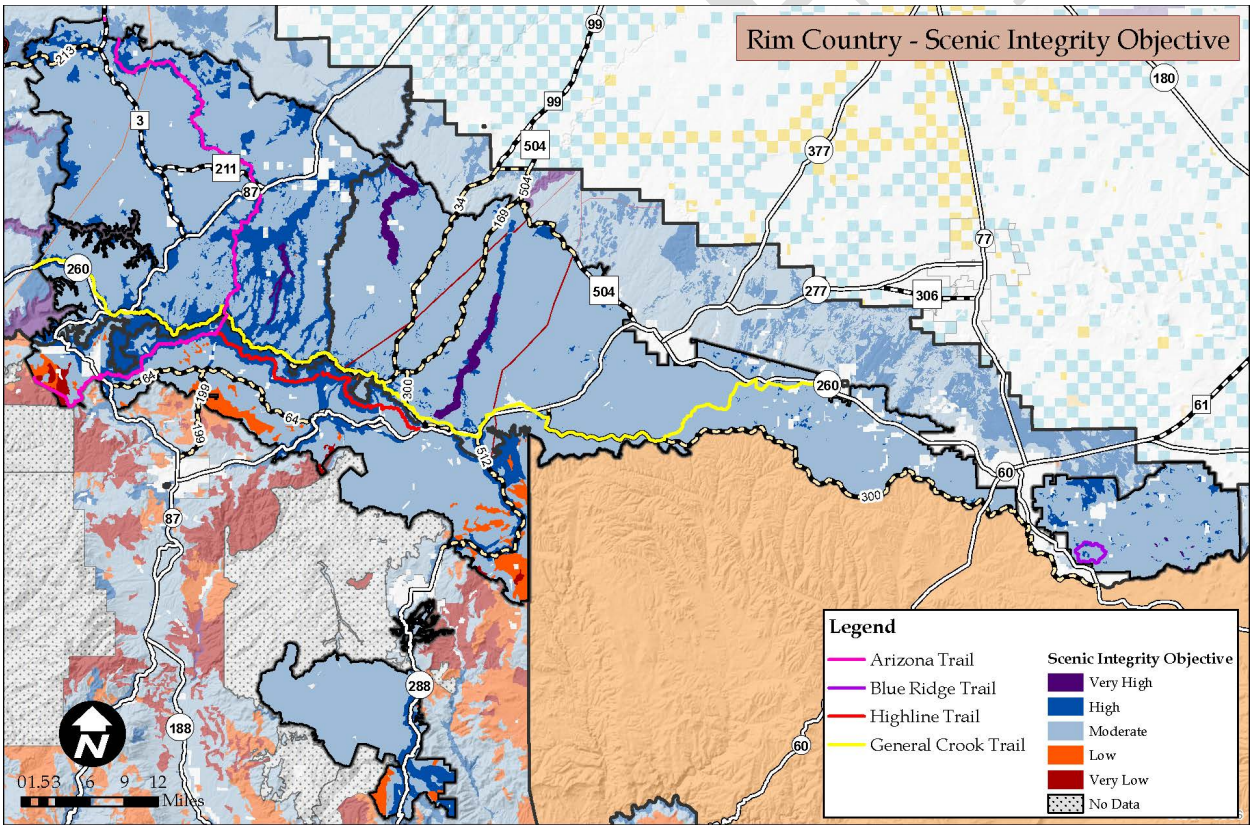

Figure 12. National Trails in the project area

There are currently no designated segments of wild and scenic rivers in the Rim Country project area. There are however, currently nine segments of eligible wild and scenic rivers on the Apache-Sitgreaves and Coconino National Forests that contribute to the scenic quality of the project area. Each system has a buffer of one-quarter mile on each side where High SIO must be maintained per the forest plans. In

addition, as part of its forest plan revision process, the Tonto NF is completing an updated eligibility report for wild and scenic rivers to replace the existing eligibility report from 1993. To ensure compliance with current forest plan direction, this analysis includes both the eligible rivers reported in the 1993 study, as well as those listed in the current draft eligibility report. The figures below illustrate the locations of the eligible wild and scenic rivers on the Apache-Sitgreaves and Coconino National Forests relative to the project area and the rivers from the 1993 eligibility report and the current eligibility study (ongoing) respectively.

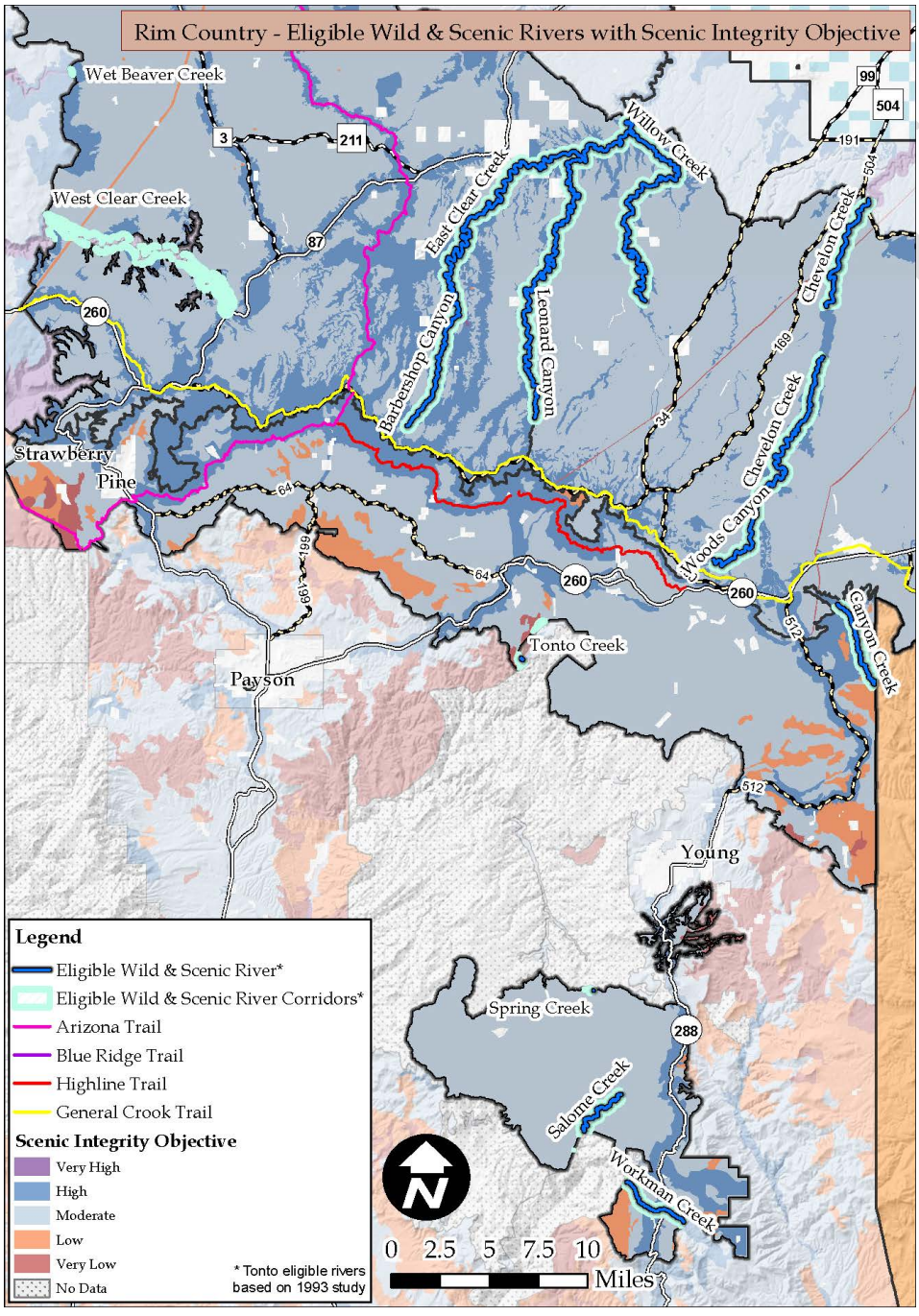

Figure 13. Eligible Wild and Scenic Rivers Segments in 1993 Tonto Eligibility Report

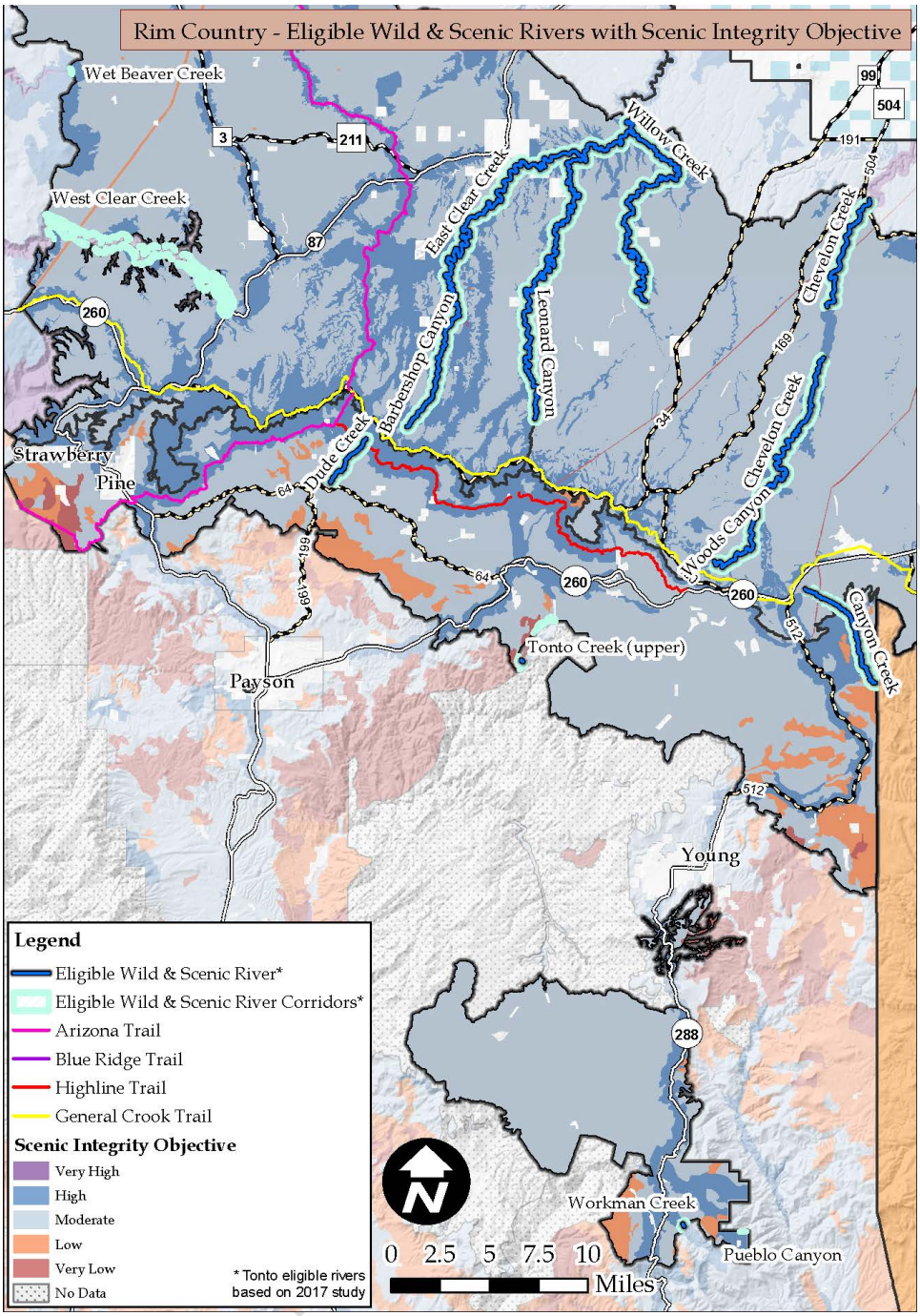

Figure 14. Eligible Wild and Scenic River Segments with Current Tonto Eligibility Study

Landscape visibility describes the portions of landscapes visible from travelways and use areas important to constituents for their scenic quality, aesthetic values, and landscape merits. Travelways and use areas have identified sensitivity levels for viewing scenery. Concern Level 1, the highest concern for scenery, is given to travelways or use areas that often lead to distinctive scenic features, residential areas, resorts, recreation areas, etc., and attract a higher percentage of users having high concern for scenic quality, thus increasing the importance of those travelways for viewing natural-appearing scenery (Forest Service 2000). These areas most often have High SIO allocated to the foreground distance zone. Highway 87, Roads 3 and 512, and the From the Desert to Tall Pines Scenic Byway (288), are Concern Level 1 roads.

The National Trails detailed above are all examples of Concern Level 1 trails. Concern Level 2 is assigned to routes and places that are locally important, where people have a moderate to high concern for scenic quality. Forest Road 64, would be considered a Concern Level 2 route. The existing Scenic Integrity level ranges from Moderate to High along Concern Level 1 and 2 routes. All routes with a High SIO adjacent to them would be considered Concern Level 1 routes.

Ecosystem Context

The vegetation is the dominant scenic attribute in the project area. There are substantial opportunities for improvement of the ecological function and for scenery attributes. The existing vegetation density and lack of high frequency, low-severity fires are inconsistent with the desired scenic character and its sustainability.

- Currently, the dense conifer vegetation often obscures views of existing scenic attributes within the forest canopy and understory, and greatly restricts viewing access to potential scenic attributes. Among the potential attributes are large, mature trees, diverse species including aspen, evergreen oak, Gambel oak, grasslands as well as other understory shrubs, grasses and forbs.
- Inter-tree spaces and openings have been filled with small and medium sized trees, where if these were opened up, they would allow for sunlight to reach the forest floor adding to the scenic quality as well as helping provide for greater understory vegetation composition and abundance.
- Fire has been suppressed for many years, and this in combination with overly dense forests departs significantly from reference conditions. Currently there is a risk of large scale, high severity fire that could result in elimination of the vegetation scenic attributes that are desired. High frequency, low severity fire helps to recycle nutrients, keep tree densities lower, and keep fuel accumulations lower.
- Seeps, springs and ephemeral drainages have had conifers encroach and overtop other species reducing their function over time. When these features are functioning properly, they provide high scenic quality and auditory, tactile and visual features not found without the presence of water.
- Throughout the forest unauthorized routes and redundant roads have been created. These detract from the scenic quality of the area by forming un-natural linear features that are uncharacteristic of the landscape. Decommissioning the routes and roads will restore characteristic forest landscape features.

Environmental Consequences

The 4FRI Rim Country Project area is important to many people for its unique scenic qualities. These scenic qualities are admired from the panoramic views of the Mogollon Rim, from the four National Trails, developed recreation sites and the scenic roads that wind through the project area. Because of the high concentration of visitors to the project area, the scenic resources of this area are critical to their experience and perceptions. The Presidents Commission on Americans Outdoors identified natural beauty as the most cited reason for choosing an outdoor recreation site (Rosenberger and Smith 1998).

Alternative 1 – No Action

Alternative 1 proposes no action and initiates no human caused changes to the scenic resources or visual quality objectives within the project area. In the short term, the scenic integrity would remain unchanged and the project area would continue to be mostly natural appearing for several years. In the long term, important scenic attributes such as scattered groups of trees of all ages with grassy openings, evidence of frequent low severity fire, large mature tree character, diverse understory, prominent Gambel oak and

grasslands, functioning riparian systems and ephemeral channels that historically contributed to the attractiveness of the area would continue to decline along with scenic integrity.

There is the potential, if dense stands foster beetle outbreaks, mistletoe infestation or other forest health concerns, that tree vitality would decline and there would be a reduction of scenic integrity. If stand replacing wild fire were to occur, this would also result in the loss of valued scenic character and would continue to be of concern to the Coconino, Apache-Sitgreaves, and Tonto National Forests and residents of the surrounding communities. If a large fire or series of fires occur, views of a fire altered landscape may begin to dominate. Effects on scenic quality include charred bark of standing trees and down logs, and a blackened appearance to the ground plane and burned understory plants. The visual effects would be reduced within two years, with the regeneration of ground cover plants and the deposition of forest litter over the burned sites. Charred bark, limbs and other features may be visible for many years. The burned areas would likely regenerate in dense stands of shrubs and seedlings, particularly in moist sites at the bottom of drainages and where root stock and seed sources exist.

These changes would be visible throughout the project area in the foreground of Forest roads and trails, and as middle ground and background views from communities within the project area, and developed recreation sites. If a wildfire were to occur near a recreation site, those who use the sites may choose to go elsewhere, if they are sensitive to the appearance of a fire altered landscape.

Under this alternative there would be no opportunities to enhance and improve scenic resources or achieve the desired condition since there would be no thinning, prescribed fire, or other treatments related to restoration. The forests would continue to implement small scale thinning and prescribed burning, but nothing on the scale of this project. As a result, very little progress would be made toward desired conditions.

The No Action Alternative would not meet the project desired conditions or forest plan direction. It would not meet long-term scenic integrity objectives since these are dependent upon improving the condition of scenic attributes so that they are more resilient to ecological stressors. In addition, the No Action would continue the current condition outside of the natural range of variability.

Cumulative Effects

Alternative 1 – No Action

The cumulative effects analysis area is the ponderosa pine forest on the Coconino, Apache-Sitgreaves and Tonto NFs within the Rim Country project area?. The timeline for analysis is 20-30 years because most long-term effects of the alternatives are assessed out to a 20-30 year timeframe (with the exception of large-scale high-severity wildfire which is more difficult to project). The following is a list of actions relating to scenic attributes, landscape character and scenic integrity considered in the cumulative effects analysis for this project:

- Past activities that created the current conditions include grazing, the evolving forest management practices related to timber harvest and fire suppression, drought, disease and insect infestations, and dispersed recreational use.

- Present and future activities such as vegetation management, fire and fuels management, utility corridor clearing and new utility corridors, and other management activities (e.g., noxious weeds treatments). These activities could occur on private lands as well.

Current, ongoing, and foreseeable projects within the Rim Country project area are shown in Table 10. Some of these projects are in the early stages of proposal development or are on hold, so their

implementation is reasonably foreseeable but not assured. The acreages shown under mechanical vegetation management and fuels treatments are not all mutually exclusive. There are many acres on which proposed fuels treatments (mechanical and prescribed fire) overlap with proposed mechanical vegetation management treatments.

Table 10. Approximate acres of current, ongoing and foreseeable vegetation management activities within the project area.

Treatment	Treatment Type	Current Projects Approximate Acres	Reasonable Foreseeable Projects Approximate Acres
	Thinning -Habitat Improvement	89,579	10,975
Mechanical Vegetation Management	Thinning – Fuels Reduction Emphasis	114,570	41,046
	Thinning – Restoration Emphasis	53,578	285
	Savanna/Grassland Restoration	0	39,000
	Salvage	5,678	0
	Range Cover Manipulation	34,701	54,147
	Invasive Plant/Weed Treatment	0	0
	Powerline Hazard Tree Removal and Right of Way	4,580	22,963
Total Mechanical:		**302,686**	**168,416**
Fuels Treatments (With Mechanical)	Mechanical Fuels Treatment	155,244	49,165
	Pile and Burn	133,168	5,070
	Broadcast Burn	250,373	59,640
Total Fuels Treatments		538,175	113,875

The cumulative effects of past management activities are visible as the existing conditions. Vegetation management practices, fire suppression, and over grazing have resulted in the current overly dense forests, even-aged forest structure, and sparse understory trees, shrubs, grasses and forbs.

The short term cumulative effects (1-5 years) of the No Action alternative combined with similar current and future restoration treatments and prescribed burning projects are expected to be negligible, unless additional large scale, high severity wildfires occur in the ponderosa pine type in the project area?. If wildfires burn large areas, the scenic quality would be decreased, and there would be long term negative changes in scenic character. The scenic attributes that contribute to high scenic integrity, such as an open forest with tree groups of varying ages, sizes and shapes, large, mature trees, and healthy, diverse understory would decline or not be present. The scenic effect of a high-severity wildfire would combine with scenic effects from adjacent land development, utility development and/or maintenance, and effects from dispersed recreation use to result in a cumulative effect so that scenic integrity is greatly diminished in areas burned for up to a decade or more. In some places there would be a chance that climate change could contribute to type changes in parts of the ponderosa pine forest so that these characteristics would be replaced with difference landscape characteristics, which would also cumulatively effect scenic attributes.

In the absence of large, high severity wildfires, long term cumulative effects of the No Action alternative and present and future vegetation management activities (Table 10) would be relatively small and localized. In the absence of large scale treatment, the scale of treatments that are currently accomplished

would not result in improvement to scenic integrity. The desired landscape character of an open forest with tree groups of varying sizes, shapes and ages, presence of large, mature trees, and healthy, diverse understory would not be met.The comparison of effects in Table 11 below for the No Action alternative indicates the only positive effect/trend would be the cumulative effect of Motorized Travel Management. All other ongoing or reasonably foreseen actions would result in a decline in the vegetation, water and land form that create the landscape character of the area, decreased long term scenic attractiveness as the unique natural and cultural elements that combine to form the scenic beauty of the area decline, and a downward trend in the scenic integrity objectives as deviations from the valued landscape character become more pronounced.

Table 11. Comparison of relative cumulative effects on scenery for No Action

Activity	Relative Contribution to Cumulative Effects on Scenery							
	Positive Effects/Trend				Negative Effects/Trend			
	I/S	Low	Moderate	High	I/S	Low	Moderate	High
Past Vegetation Management		X						X
Present/Future Vegetation Management			X				X	
Past Fire		X						X
Present/Future Fire				X			X	
Motorized Travel Management				X		X		
Dispersed Recreation		X					X	
Grazing (developments and fencing)		X					X	
Utility Corridors	X							X

Effects Common to All Action Alternatives

The effects on scenery for Alternative 2 would be the same for Alternative 3 with the exception of the difference in treatment acres where the effects would occur. Alternative 3 treats 47% less area than Alternative 2, so the following effects can be expected to affect scenic resources in less of the project area for Alternative 3 versus Alternative 2. The effects common to both action alternatives are analyzed below.

Aspen, Native Willows, Big-Tooth Maple, Seep/Spring Protective Barriers

Aspen, Native Willows, Big-Tooth Maple, ephemeral drainage treatments and spring/seep areas require protective barriers to protect the areas from browsing. Both action alternatives require up to 200 miles of protective barriers. Barrier materials proposed include wire, wood and jackstrawing of trees. All would introduce unnatural linear features into the landscape that would not be natural appearing. Since these are isolated areas scattered around the over 1,000,000 acre project area, introduction of linear features would have minor effects.

Wood fencing materials would have the least effect since they would be in scale, and have texture and color that would look most natural in the seep/spring and aspen settings. Many times wooden fencing is viewed as an attractive cultural feature. If the fences are maintained, wood fencing would have very low effects and would meet the SIO. If they fall into disrepair, this would detract from their appearance, but they would still meet the SIO.

Wire fencing materials would be more noticeable than wooden fences. Wire and metal posts can be shiny and their color can contrast with the natural surroundings. Design features will be used to introduce the fewest contrasting elements where wire fencing is used and effort would be made to locate the fencing where it is least noticeable. Wire fencing would have low effects and would meet the SIO.

Jackstrawing has been used to a limited extent on the Coconino NF in order to protect aspen restoration projects from ungulate browsing. It involves cutting and stacking high numbers of cut trees in an irregular manner to form a wide, tall barrier surrounding the aspen stand. While natural materials would be used to create the jackstraw, the shape and form created at this scale would not normally be found in the characteristic landscape. It would not be completely unnatural however, as it would be similar to large scale blow down events that may be caused by weather related events. Placement of jackstraw treatment would not meet the requirements for foregrounds of Concern Level 1 roads or the National Trails in high SIO areas. Even if foreground sites were allowed to drop one SIO level, they would still not meet the basic definition of moderate SIO that "noticeable deviations must remain visually subordinate to the landscape character being viewed" (Forest Service 2000). Beyond the foreground, jack-straw piling may be suitable, and would be mitigated by carefully locating these barriers. As noted, the short term effects timeline for jackstrawing around aspen would be longer than for conifers, up to 20 years. Design criteria will be implemented to avoid placement of jackstraw within the foreground of high concern level roads or National Trails. As jack-straw barrier begins to deteriorate, trees lose their brown needles, branches break off, and logs lose their bark and grey out, the jack-straw piles compress and become less noticeable. It is anticipated that the aspen would also be large enough to withstand ungulate browsing when the jack-stray piles deteriorate or are burned in follow up prescribed burning activities. These areas will improve over time to the mapped SIO.

Landing Sites

Landing sites, where logs are processed for removal, are a primary short term visual effect. These sites are cleared, and scraped and leveled. Slash, log decks, and equipment dominate the immediate foreground view, and will be evident from a foreground view. Ground disturbance occurs from trucks, loaders and skidders moving over the site. After harvest is complete and slash has been removed, the site disturbance will be evident for approximately five years following use of the site. Sometimes landing sites require additional tree clearing.

Trails

People are often more sensitive to changes in the landscape along trails, than along roads and recreation developments. This is because they travel at a slower pace, and are immersed in the environment, and tend to have an expectation for a natural appearing setting. Smaller details, such as stumps and slash, are more likely to be noticed.

As a result, a decrease in the sense of solitude and diminished scenic quality will likely occur while traveling the trails within the project area. Most viewers will perceive diminished scenic quality along area trails until slash is reduced, and the remaining trees have matured. Temporary roads and skid trails will potentially cross the trails. There will be a reduction in the natural appearance of the forest as viewed from the trail. There will be increased encounters with people and machinery until the project is completed. Many of the trails provide access to unmanaged areas; this negatively affects visitor's experience when they anticipated a more natural, unmanaged environment. This will be reduced over time, and should be a minimal effect over 10 -15 years, once ground cover and understory are reestablished and the slash has been reduced.

The Scenic Integrity will likely be reduced in the foreground and middleground, because viewers will more likely be aware of details as treatments. A decrease in the sense of solitude could lead to displacement of trail users in the short term (1 to 5 years.) They may opt to visit other areas where they will have the experience of a landscape that appears unmanaged.

National Trails, specifically the Arizona, Highline and General Crook Trail will have similar short term effects on scenery as described above. However, additional design criteria specific to National Trails will help protect the scenic integrity, especially in the foreground of the trail, during project implementation. Ultimately, in the long term, the vegetation activities will move the vegetation adjacent to trails towards desired conditions outlined in the Forest Plan.

Developed Recreation Sites

Mechanical and prescribed fire treatments could negatively affect developed recreation sites. However, developed recreation sites will not be modified by any alternatives as design features have been developed to protect the sites from possible negative effects from proposed treatments in alternatives 2 and 3.

For campsites, it is desirable to provide and retain privacy and screening, screen other constructed features such as restrooms, provide shade, retain unique character trees and so on. Per the design criteria for recreation campgrounds, these areas will be treated, but require coordination with the District Recreation Staff in order to determine places where no treatment will occur in order to protect constructed features. In addition prioritizing treatments, treatment timing and slash pile locations will be agreed upon. Immediate adjacent to the campgrounds (outside of fenced or otherwise delineated campground boundaries), prescribed burning or mechanical treatments and burning would be appropriate.

For other developed recreation sites, it is appropriate to include burning or mechanical treatments and burning outside of an established boundary that will protect the constructed features at these sites. Per the mitigations for recreation, these boundaries will be established in conjunction with the District Recreation Staff prior to treatment.

Effects of treatments in developed recreation sites would be similar to those analyzed for mechanical treatments and prescribed burning discussed in this report under Alternatives 2 and 3. There would be short term reductions in scenic quality as a result of treatments. In the long term, the treatments would help to reduce risks to scenic stability and would improve the overall scenic integrity.

Eligible Wild and Scenic Rivers

The overall objectives for management within the project area are to bring the landscape closer to the desired conditions outlined in the Forest Plan. Wild and scenic rivers are managed to protect the outstandingly remarkable values for which they were designated in the National Wild and Scenic River Preservation System and to protect their free-flowing nature. Rivers determined to be eligible for the System are also managed to protect the outstandingly remarkable values for which they are eligible. There are currently 9 eligible wild and scenic rivers on the Apache-Sitgreaves and Coconino National Forest and additional segments on the Tonto National Forest from the 1993 eligibility study and the current eligibility study. A map illustrating the locations of the segments are in the Scenic Character Description portion of this report. The tables below show the classifications of each eligible wild and scenic river segment (including the Tonto 1993 and current eligibility study) as well as the treatment type and acres affected for each alternative.

Table 12. Alternative 2 Eligible Wild and Scenic Rivers on the A-S and Coconino

Eligible Wild & Scenic Rivers on the Apache-Sitgreaves and Coconino NF Alternative 2			
River Name and Class	**Mechanical & Prescribed Fire**	**Prescribed Fire Only**	**Total Acres**
Barbershop Canyon	**2,601**	**1,140**	**3,741**

Wild	2,601	1,140	3,741
Chevelon Creek	**2,228**	**5,053**	**7,281**
Recreational	617	0	617
Scenic	1,611	0	1,611
Wild	0	5,053	5,053
East Clear Creek	**3,406**	**2,063**	**5,469**
Scenic	3,406	2,063	5,469
Leonard Canyon	**3,542**	**2,372**	**5,914**
Recreational	3,542	2,372	5,914
West Clear Creek	**1,194**	**551**	**1,745**
Wild	1,194	551	1,745
Wet Beaver Creek	**8**	**11**	**19**
Wild	8	11	19
Willow Creek	**0**	**4,806**	**4,806**
Wild	0	4,806	4,806
Grand Total	**12,979**	**15,996**	**28,976**

Table 13. Alternative 2 Eligible Wild and Scenic Rivers on the Tonto - 1993 Study

Eligible Wild & Scenic Rivers on the Tonto NF Identified in the 1993 Eligibility Study **Alternative 2**			
River Name and Class	**Mechanical & Prescribed Fire**	**Prescribed Fire Only**	**Total Acres**
Canyon Creek	**1,150**	**364**	**1,514**
Recreational	1,150	364	1,514
Salome Creek	**1,112**	**0**	**1,112**
Wild	1,112	0	1,112
Spring Creek	**34**	**0**	**34**
Recreational	34	0	34
Tonto Creek	**150**	**0**	**150**
Wild	150	0	150
Workman Creek	**1,159**	**0**	**1,159**
Recreational	1,159	0	1,159
Grand Total	**3,605**	**364**	**3,969**

Table 14. Alternative 2 Eligible Wild and Scenic Rivers on Tonto - Current Study

Eligible Wild & Scenic Rivers on the Tonto NF Identified in the Current Study **Alternative 2**			
River Name and Class	**Mechanical & Prescribed Fire**	**Prescribed Fire Only**	**Total Acres**
Canyon Creek	**1,548**	**364**	**1,913**
Recreational	1,548	364	1,913

Dude Creek	**1,045**	**0**	**1,045**
Recreational	1,045	0	1,045
Pueblo Canyon	**0**	**9**	**9**
Wild	0	9	9
Tonto Creek (upper)	**211**	**0**	**211**
Scenic	211	0	211
Workman Creek	**82**	**0**	**82**
Recreational	82	0	82
Grand Total	**2,886**	**373**	**3,259**

Table 15. Alternative 3 Eligible Wild and Scenic Rivers on the Apache-Sitgreaves NF

Eligible Wild & Scenic Rivers on the Apache-Sitgreaves and Coconino NF Alternative 3			
River Name and Class	**Mechanical & Prescribed Fire**	**Prescribed Fire Only**	**Grand Total**
Barbershop Canyon	**2,601**	**1,054**	**3,656**
Wild	2,601	1,054	3,656
Chevelon Creek	**235**	**3,441**	**3,676**
Recreational	66	0	66
Scenic	169	0	169
Wild	0	3,441	3,441
East Clear Creek	**2,581**	**1,718**	**4,299**
Scenic	2,581	1,718	4,299
Leonard Canyon	**3,542**	**2,372**	**5,914**
Recreational	3,542	2,372	5,914
West Clear Creek	**877**	**111**	**988**
Wild	877	111	988
Wet Beaver Creek	**8**	**0**	**8**
Wild	8	0	8
Willow Creek	**0**	**3,504**	**3,504**
Wild	0	3,504	3,504
Grand Total	**9,844**	**12,200**	**22,044**

Table 16. Alternative 3 Eligible Wild and Scenic Rivers on the Tonto NF - 1993 Eligibility Study

Eligible Wild & Scenic Rivers on the Tonto NF Identified in the 1993 Eligibility Study Alternative 3			
River Name and Class	**Mechanical & Prescribed Fire**	**Prescribed Fire Only**	**Grand Total**
Canyon Creek	**1,150**	**364**	**1,514**
Recreational	**1,150**	**364**	**1,514**
Salome Creek	**707**	**0**	**707**

Wild	**707**	**0**	**707**
Spring Creek	**0**	**0**	**0**
Recreational	**0**	**0**	**0**
Tonto Creek	**57**	**0**	**57**
Wild	**57**	**0**	**57**
Workman Creek	**820**	**0**	**820**
Recreational	**820**	**0**	**820**
Grand Total	**2,735**	**364**	**3,099**

Table 17. Alternative 3 Eligible Wild and Scenic Rivers on the Tonto NF - Current Study

Eligible Wild & Scenic Rivers on the Tonto NF Identified in the current study Alternative 3			
River Name and Class	**Mechanical & Prescribed Fire**	**Prescribed Fire Only**	**Grand Total**
Canyon Creek	**1,548**	**364**	**1,913**
Recreational	1,548	364	1,913
Dude Creek	**1,045**	**0**	**1,045**
Recreational	1,045	0	1,045
Pueblo Canyon	**0**	**0**	**0**
Wild	0	0	0
Tonto Creek (upper)	**117**	**0**	**117**
Scenic	117	0	117
Workman Creek	**7**	**0**	**7**
Recreational	7	0	7
Grand Total	**2,717**	**364**	**3,081**

As noted in the Interagency Wild & Scenic Rivers Coordinating Council Technical Paper (IWSR Coordinating Council 2014) “Timber management activities on federal lands within WSR corridors must be designed to help achieve land-management objectives consistent with the protection and enhancement of the values that caused the river to be added to the National System. Management direction needed to protect and enhance the rivers values is developed through the river planning process. WSR designation is not likely to significantly affect timber management activities beyond existing measures to protect riparian zones, wetlands, and other resource values as guided by other federal requirements.” In addition, “Timber management activities on federal lands outside the corridor are managed to protect and enhance the values that caused the river to be designated. Measures needed to protect and enhance the rivers values are developed through the river planning process and include management direction as necessary for lands adjacent to the corridor.”

The treatment areas that overlap the proposed WSR boundary have specific design criteria for scenery, recreation and other resource protection. The design features have been included in Appendix C specifically for the purpose of adjusting proposed treatments in the future as eligibility and suitability are determined. Any management activities proposed in eligible wild and scenic river corridors in the Rim Country project area would have the purposes of restoring natural geomorphic and ecological processes and the specific outstandingly remarkable values (ORVs) of the river. These activities are proposed to move the vegetation within the corridor towards desired conditions outlined in the Forest Plan and

according to the standards and guidelines for the river corridors. In addition, the proposed activities would help to protect potential scenic values of the eligible wild and scenic river from the effects of wild fire. For both Alternatives, there would be short term effects associated with mechanical treatment and prescribed fire within the eligible wild and scenic river corridors, but in the long term, the proposed vegetation treatments would increase diversity for scenery. Overall, the scenery outstandingly remarkable value would be maintained and enhanced.

Wilderness

There are no treatments proposed in wilderness therefore there will be no effects on wilderness areas. However, at the viewpoint toward or from the Wilderness, there will be a change in the texture between the forested area that will be treated outside the Wilderness, and the untreated forest within the wilderness. There will be increased areas of ground seen between the remaining trees, giving a more coarse appearance to the landscape and slopes. In the case where the Wilderness boundary crosses on a slope, it is possible that this boundary may be evident to observers because of the change in the forest texture. Because of the increased dominance, the scenic integrity will likely be reduced in the short term.

Large Mature Trees

The proposed actions would meet forest plan requirements for large mature trees across the landscape. Some allocated acres will not meet all old growth characteristics, but will move conditions toward requirements for large trees, downed woody debris, and snags. The more open, groupy character of the conifer forest will help make the trees more visible and as a result, more prominent. Use of the old tree strategy will help recruit and retain large trees. The treated areas will have more of the desired landscape characteristics and will make progress toward meeting SIO.

Proposed Activities for Mexican Spotted Owls

As a result of the treatments proposed under this alternative, stands throughout most of the project area would appear more to have the desired conditions of open, groups of trees of all ages and sizes. In some areas, treatments are modified for Mexican spotted owls. These changes are designed to meet other laws, regulations and policies.

MSO treatments proposed incorporate the need for “Improving habitat structure in addition to managing for fire risk abatement is consistent with the USFWS draft MSO recovery plan that focuses on desired conditions and provides for treating PACs to meet restoration and fuels reduction objectives. A key draft recovery objective is to maintain habitat conditions necessary to provide roosting and nesting habitat (pp. 84-85) (USDI 2012)”. This treatment would result in stands appearing slightly more open and more diverse over time when compared to the existing condition, although the difference may not be noticeable to the casual forest visitor, particularly when driving along the roads. The treatments proposed for MSO will move the habitat toward desired conditions, but scenic attributes in these areas will continue to be at risk from ecological stressors.

Rock Pits

Effects from Rock Pit Use and Expansion are described later in this report.

In-woods Processing and Storage Sites

Effects from In-Woods Processing and Storage Sites are described later in this report.

Effects Unique to Each Action Alternative and Differences Among Them

Alternative 2 – Modified Proposed Action

Mechanical Treatment and Burning

Approximately 953,130 acres would be mechanically thinned or burned with prescribed fire under this alternative. Figure 14 provides the approximate locations of treatments activities for this project.

Mechanical treatments include, but are not limited to use of chainsaws or feller-bunchers to cut trees and lop slash, skidders to move material to landings, bulldozers to pile slash, and specialized equipment such as feller-bunchers or track-type hot saws, and tree shears to cut, chop, break, and lop fuel material. The effects of these activities include:

Hand thinning usually has little or no short term effects on scenery. Trees are cut down, then cut into segments that can be treated. Effects may include slash from limbing and topping trees. Project mitigations require slash to be treated.

Conventional mechanical treatments typically have moderate short term effects on scenery. During implementation, in most cases whole trees are cut and moved to a "landing" near a haul road. At the landing, the limbs and tops are removed, and the clean logs are decked to be loaded and hauled away. After vegetation has been thinned, the slash is piled using bulldozers. Effects typically include trampling of vegetation where equipment is operating, creation of linear skid trails where vegetation is trampled or completely removed exposing bare soil, creation of linear log landings where vegetation has been removed and bare soil is exposed, and piles of cull logs not suitable for commercial uses. After logs or useable material is removed, slash would be treated as per mitigation measures. This may include bulldozers push slash into large piles (10-20 foot wide piles, often 10 feet tall) which can trample vegetation and cause bare soil to be exposed, and hand piling. Design criteria would prioritize treatment of slash along high concern level roads (those in High SIO), require trails to be returned to pre-treatment conditions, and cull logs be removed from landings and potentially used to help close off entrances to decommissioned roads.

There would be a low to moderate effect on scenic quality during and immediately following mechanical treatment methods. Stumps are typically left no more than six inches high and are often cut flush unless prevented by rocks or other natural features. The presence of skid trails, landings, and piled or scattered slash would also result in a moderate reduction of the scenic quality until harvesting activities are completed, and design features are implemented. The effects in these areas would be short-term (lasting 1 to 5 years after treatment) since skid trails would be rehabilitated and activity generated slash would be treated or mostly removed to be utilized. The ground disturbance resulting from using machines to pile slash would be noticeable for one to three years after project completion, depending on how quickly the areas revegetate. Scraped trees would heal or scars would become less noticeable over time.

Prescribed burning would likely result in short-term, moderate reduction in scenic quality, but with ground vegetation recovery, can enhance scenic beauty within five years. Where prescribed fire is limited to slash reduction, there would be isolated areas of burned piles evident. Once these piles have been scattered there may be some short term evidence of darkened litter and soil that would be reduced within five years and generally only be noticeable within the immediate foreground. Greater visual effects would occur in areas where prescribed fire is used as a tool to regenerate aspen or reintroduce fire. This includes charred bark of standing trees and down logs, and a blackened appearance to the ground plane and burned understory plants. The visual effects would be reduced within two years, with the

regeneration of ground cover plants and the deposition of forest litter over the burned sites. Charred bark, limbs and other features could be visible for many years.

Smoke from prescribed burning would be heaviest during the initial burns, and would reduce visibility of the scenic landscape in the short term. Some residual smoke could be expected to continue in small localized areas where stumps or roots smolder for up to a few weeks. The residual smoke would have little if any effect on visibility of scenic attributes.

The restoration treatment areas should be recovered and moving toward reference conditions after the first thinning and prescribed burning activities. These would be further improved after follow up prescribed fire treatments. The restoration treatments would meet the purpose and need of the project and would help move the forest structure, pattern and composition toward reference conditions.

Road Reconstruction and Decommissioning

Approximately 150 miles of existing roads will be reconstructed with Alternative 2. There will be little to no effects from road improvements. Improvements may include, but are not limited to, drainage improvements, tree removal, slight realignments and addition of surfacing materials. Potential effects include exposure of bare soil, tree stumps, and contrasting color and texture of surfacing materials. These effects are usually short term (1 – 5 years) and become less noticeable as natural vegetation is re-established and the surfacing material begins to be incorporated into the soil horizon. Road relocation would have more noticeable effects on scenery. Effects of the newly constructed road bed would include newly exposed bare ground, damaged vegetation, tree stumps, root wads, and contrasting color and texture of surfacing. There would also be effects associated with the old road bed. It would appear newly disturbed as well if associated drainage features such as culverts were pulled, new drainage ditches established, the surface roughened to promote vegetation establishment, and slash, brush, boulders or other devices used to close off the entrance. There would be a strong contrast between the existing forest floor and the new and old road beds that would detract from scenic quality. Mitigation measures and best management practices would be used during road reconstruction. The old roads would naturalize over time and become less noticeable to the casual observer

Approximately 330 miles temporary roads would be constructed for haul access. These would be decommissioned when treatments are finished. The new temporary roads would add new, unnatural linear features into the landscape on a temporary basis. Trees would be removed, soil exposed, and roadbeds constructed including minimal drainage features. This would have moderate effects on the mapped SIO. In high SIO, the new temporary road construction would drop these areas one level to Moderate until the roads are decommissioned and begin to naturalize about five years later. Design criteria and best management practices would be used to rehabilitate decommissioned roads and this would hasten their recovery.

Under this alternative up to 200 miles of system road on the Coconino and Apache-Sitgreaves National Forests could be decommissioned. The Tonto National Forest Travel Management EIS has identified approximately 290 miles of road within the Rim Country project area for decommissioning. In addition to system road decommissioning, up to 800 miles of unauthorized roads on all three forests may be decommissioned under this alternative. Following decommissioning, all roads would be allowed to naturalize. There would be short term effects (up to 5 years) as the roads have drainage established, the surface area roughened, seeded, and mulched with pine needles and slash, boulders and other devices are used to close off entrances to the roads. Design criteria and best management practices would be used to rehabilitate these roads. The existing closed roads would naturalize over time and become unnoticeable to the casual observer.

Scenery Desired Conditions, Compliance with Forest Plans and Scenic Attributes

The 4FRI Rim Country project would help achieve the desired conditions for scenery as defined in the forest plans. Designation of interim SIO and meeting forest plan mapped SIO in the long term would be met under this alternative. Scenic quality would be enhanced to a greater extent than under Alternative 1 and Alternative 3 as the spatial distribution is improved.

Throughout much of the project area, stand density would be reduced. The views along primary and secondary travel corridors, from communities, and developed recreation sites and trails would be more open and diverse. Visitors traveling along these corridors would experience a sequence of enclosures and openings that add variety and afford more expansive views into the project area. Natural meadows and grasslands would be improved, aspen stands regenerated, and oaks reinvigorated which would increase visual diversity and make these valued scenic features more prominent across the landscape. Conifer stands would feature clumped, uneven-aged groups interspersed with openings. The understory component of shrubs, grasses and forbs would develop and respond to the open canopy conditions, further increasing visual diversity.

The potential for crown fire would be decreased (see fire ecology and air quality specialist report) reducing the risk to scenery attributes.

The short term visual disturbances of 1 to 5 years after completion of most restoration activities would be within the reference conditions of the area. In the short term the disturbances would be visible and would lower the scenic quality. At the completion of the thinning and prescribed burning, the natural appearance of the area would begin to recover, and would improve over time. Aspen treatments would have longer short term effects (up to 20 years) due to the need to protect sprouts from ungulate browsing. Fencing, barriers or jackstraw treatments would detract from scenic quality until the aspen sprouts can withstand browsing and fencing can be removed, or jackstraw piles are burned or deteriorate over time. Throughout project implementation it is expected that the valued scenic character would begin to improve, and the risks to scenic attributes would decrease.

Cumulative Effects

Alternative 2 – Modified Proposed Action

The cumulative effects analysis area is the ponderosa pine forest on the Coconino, Apache-Sitgreaves and Tonto NFs. The timeline for analysis is 20-30 years because most long-term effects of the alternatives are assessed out to a 20-30 year timeframe (with the exception of large scale high severity wildfire which is more difficult to project).

Past activities in the project area that created the current conditions include grazing, the evolving forest management practices related to timber harvest and fire suppression, drought, disease, mistletoe and insect infestations, developed and dispersed recreational use.

As described under the no action alternative, there are numerous current and future foreseeable projects such as vegetation management, fuels management, utility corridor clearing and new utility corridors, and other management activities (e.g. noxious weeds treatments) that have the potential to affect visual resources. Among those, vegetation management projects and fire altered landscapes are the most likely to increase the cumulative effects on scenic resources, when analyzed with the potential effects from the Rim Country project. These vegetation management projects would alter the appearance of the landscape where ground disturbing activities would be conducted. Similar to the action alternatives, activities that are very close (300 feet or less) to scenic highways, major travelways and recreation resources, would have temporary, but adverse effects on visually sensitive areas. This increases the chance that people

would be exposed to evidence of fire and mechanical thinning activities. Once slash and/or the evidence of fire has been reduced, the forest would have a more managed appearance until understory shrubs and trees have provided a more varied appearance, which could be 30 to 40 years.

Individuals who are sensitive to the visual changes of vegetation management and fire altered landscapes would likely perceive diminished scenic quality. There would be an increased visual presence of roads. When roads are obliterated, the prism would remain for many years. However, once vegetation grows in the road prism, especially trees, it would be less noticeable, and probably only noticed by people walking across or near the road bed. The length of time for recovery range from two or three years, to over 50 years, depending on the effectiveness of the obliteration at deterring travel by off highway vehicles.

Cumulative effects on scenery resources in the Rim Country Project area are expected to meet the visual quality objectives of the Forest Plan in the short term. In High SIO areas, it is expected that any human activities would not be visually evident. In Moderate SIO areas, any deviations present are expected to be subordinate to the characteristic landscape. In Low SIO areas any deviations present may dominate the characteristic landscape but would utilize naturally established form, line, color, and texture appear natural or compatible to the natural surroundings.

Alternative 2 associated with this project, along with the projects and activities listed above may have cumulative effects on scenery resources. However, these cumulative effects are expected to meet the visual quality objectives of the Forest Plan in the short term; no long term effects are anticipated if the scenery project design features are applied.

Table 18 indicates the overall trend or effects cumulative effects for Alternative 2.

Table 18. Comparison of relative cumulative effects on scenery for Alternative 2

Activity	Relative Contribution to Cumulative Effects on Scenery							
	Positive Effects/Trend				Negative Effects/Trend			
	I/S	Low	Moderate	High	I/S	Low	Moderate	High
Past Vegetation Management		X						X
Present/Future Vegetation Management				X			X	
Past Fire		X						X
Present/Future Fire				X			X	
Motorized Travel Management				X		X		
Dispersed Recreation		X					X	
Grazing (developments and fencing)		X					X	
Utility Corridors	X							X

Alternative 3 – Focused Alternative

Mechanical Treatment and Burning

Approximately 529,060 acres would be mechanically thinned or burned with prescribed fire under Alternative 3. Figure 16 provides the approximate locations of treatments activities under this alternative. For Alternative 3, there would be 43% fewer acres of mechanical and prescribed burning activity relative to Alternative 2 that would likely result in a lesser amount of short-term, moderate reductions in scenic quality. As a result, there would be fewer visual effects in the project area where prescribed fire is used as

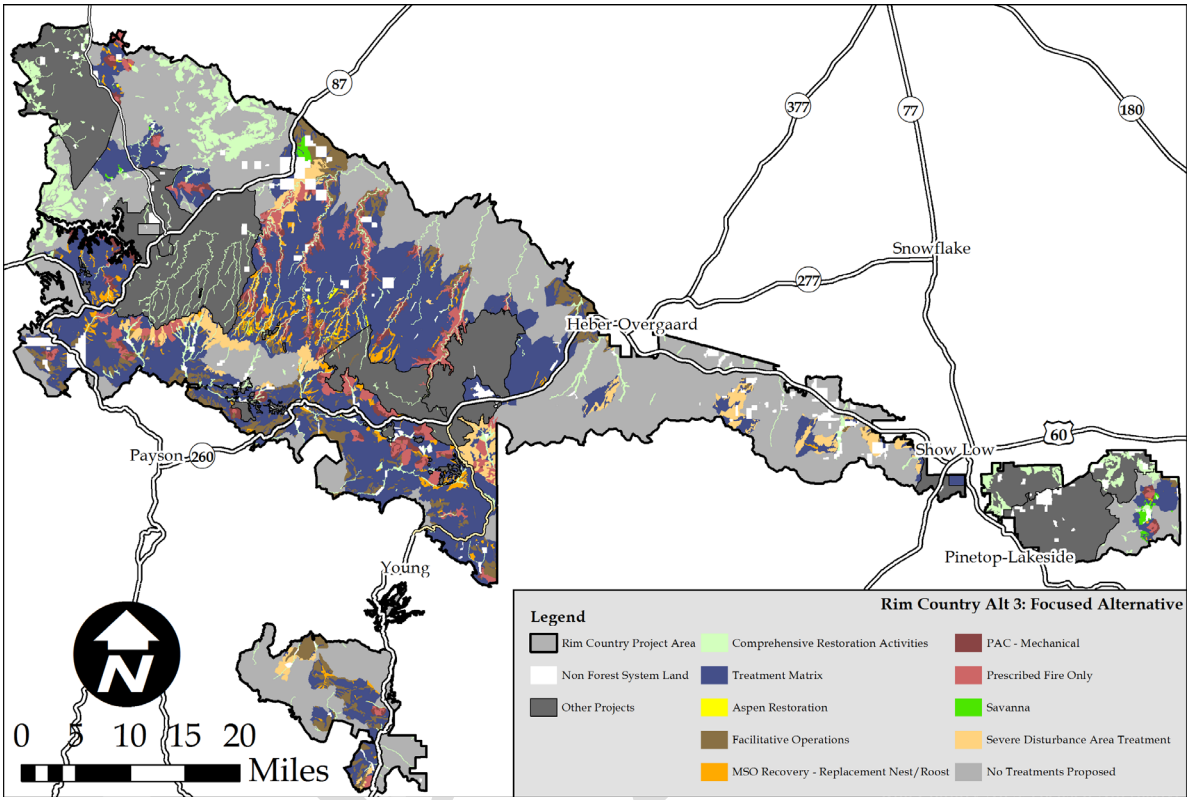

Figure 15. Locations of proposed treatments in the 4FRI area for Alternative 3

a tool to regenerate aspen or reintroduce fire, resulting in fewer areas of reduced visibility of the scenic landscape in the short term. However, Alternative 3 would treat significantly fewer acres of grasslands, savannah and open canopy cover, with fewer acres of improved understory species abundance and composition compared to Alternative 2. Ultimately, this alternative provides less potential to reduce the risk of large scale, high-severity fires in the project area. Since high severity fire is a risk factor for most scenery attributes, the fewer proposed mechanical and prescribed fire treatments in Alternative 3 would result in fewer improvements to scenic quality in the long term.

Road Reconstruction and Decommissioning

Approximately 150 miles of existing roads would be reconstructed with Alternative 3. There would be little to no effects from road improvements. Improvements may include, but are not limited to, drainage improvements, tree removal, slight realignments and addition of surfacing materials. Potential effects would be the same as described under Alternative 2.

Approximately 170 miles temporary roads would be constructed for haul access. These would be decommissioned when treatments are finished. Although the effects of temporary roads are the same as Alternative 2, this alternative proposes nearly 50% fewer temporary roads, resulting in fewer unnatural linear features in the landscape on a temporary basis. Similar to Alternative 2, this action would have moderate effects on the mapped SIO. In high SIO, the new temporary road construction would drop these

areas one level to Moderate until the roads are decommissioned and begin to naturalize about 5 years later. Design criteria and best management practices would be used to rehabilitate decommissioned roads and this would hasten their recovery.

Under this alternative up to 200 miles of system road on the Coconino and Apache-Sitgreaves National Forests could be decommissioned. The Tonto National Forest Travel Management EIS has identified approximately 290 miles of road within the Rim Country project area for decommissioning. In addition to system road decommissioning, up to 800 miles of unauthorized roads on all 3 forests may be decommissioned under this alternative. Following decommissioning, all roads would be allowed to naturalize. Effects would be as described in Alternative 2. Design criteria and best management practices would be used to rehabilitate these roads. The existing closed roads would naturalize over time and become unnoticeable to the casual observer.

Scenery Desired Conditions, Compliance with Forest Plans and Scenic Attributes

Effects would be similar to Alternative 2, however, fewer acres would be thinned and burned under this alternative than Alternative 2. As a result, this alternative would meet scenery desired conditions, but not to the scale of Alternative 2. Alternative 3 would comply with forest plans and make progress toward improving scenic attributes, but not to the scale that Alternative 2 would achieve.

Cumulative Effects

Alternative 3 – Focused Alternative

The cumulative effects would be similar to Alternative 2. Table 19 indicates there would be slightly fewer negative short-term cumulative effects in localized areas (areas with landings, temporary roads, ground disturbing activities) since this alternative would mechanically treat and burn fewer acres and require fewer temporary roads. However, there would also be slightly less positive long-term cumulative effects in terms of counteracting drought and insect damage likely to occur as a result of climate change, improved stand structure, and understory improvement since there would be less mechanical treatment and burning to facilitate greater forest resiliency.

Table 19. Comparison of relative cumulative effects on scenery for Alternative 3

Activity	Relative Contribution to Cumulative Effects on Scenery							
	Positive Effects/Trend				Negative Effects/Trend			
	I/S	Low	Moderate	High	I/S	Low	Moderate	High
Past Vegetation Management		X						X
Present/Future Vegetation Management			X				X	
Past Fire		X						X
Present/Future Fire				X			X	
Motorized Travel Management				X		X		
Dispersed Recreation		X					X	
Grazing (developments and fencing)		X					X	
Utility Corridors	X							X

Effects from Rock Pit use and Expansion

A total of 21 rock pits were identified for use and potential expansion up to 30% of their existing footprint. The materials from the rock pits may be used for a variety of road maintenance activities, from general maintenance of primary roads to construction or rehabilitation of temporary roads. The proposed use and expansion of rock pits would include hauling of equipment and aggregate materials to and from the pits for use in road maintenance, road construction, and erosion control during the duration of the 4FRI Rim Country project.

Effects Common to All Alternatives

Effects common to all alternatives include views of exposed soil at active rock pits locations, and removed vegetation. Active pits would also have processing and mining equipment, and trucks for hauling roadbed material to desired locations. In addition to space for processing equipment, pits requiring processing would also need space to store stockpiles of processed and partially processed materials. The space needed for processing equipment, stockpiling of materials, and loading is included in the footprint of each rock pit site.

Figure 17 displays the SIOs in the areas where the pits are located in relation to major travel ways and forest boundaries. Most rock pits are located in moderate SIO in forested areas making them difficult to view even from a foreground distance (300 feet to 0.5 miles). Under both action alternatives, design features would help mitigate the effect on scenery from rock pits.

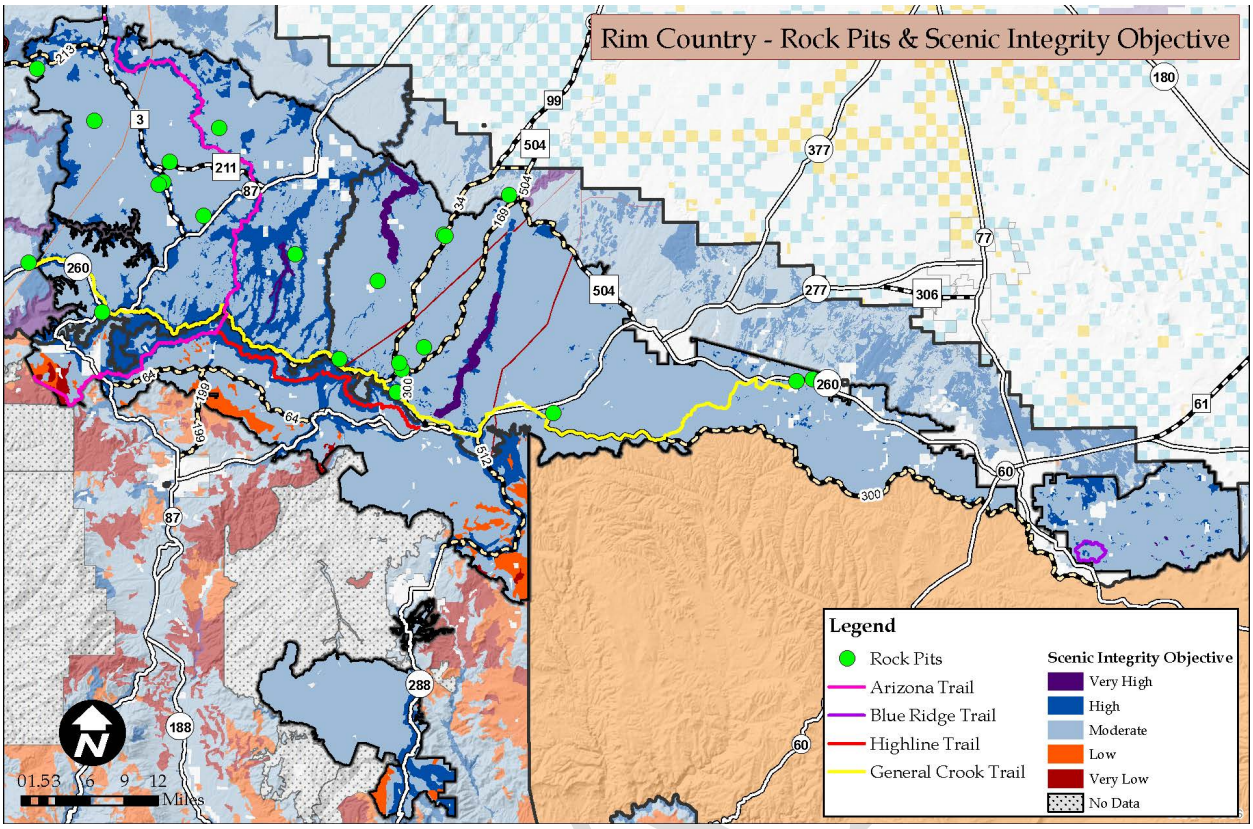

Figure 16. Rock pit locations

Alternative 1 - No Action

Direct and Indirect Effects

Under Alternative 1, for implementation of other projects and activities, rock pit activities would continue to mine and process roadbed materials from active existing pits either for maintenance of Forest Service roads, temporary road construction, or through permitted use. Direct effects on visually sensitive areas would be views of exposed soil, removed vegetation, and of trucks and other equipment used to mine and process roadbed material. The magnitude of these direct effects would vary depending on the duration of activities at each existing pit, the number of viewers that are able to see the exposed soil, removed vegetation and equipment, and the distance from which viewers can observe these project related activities.

Indirect effects would include long–term views of the pits following mining activity and before re-vegetation efforts have been completed.

Mining and processing activities that occur at any of the pits within 0.5 miles of scenic routes or major travelways, or within 0.5 miles of recreation resource areas, could cause adverse, temporary effects. The importance of these effects can be evaluated in terms of their consistency with Scenic Integrity Objectives (SIOs). Actively mined pits are consistent with the SIO of "moderate" since the landscape may appear slightly altered and the pits are visually subordinate when viewed from distances of greater than 0.5 miles, which is the breakpoint between the foreground and middle-ground distances (USDA FS 1996).

Alternative 2 – Modified Proposed Action

Direct and Indirect Effects

Alternative 2 includes the expansion, or continued use of existing rock pit footprints. A total of 21 pits would be used or expanded up to 30% across the Coconino, Apache-Sitgreaves and Tonto NFs. 10 pits are on the Coconino NF and 12 are on the Apache-Sitgreaves NF.

Due to the relatively small footprint and locations of the proposed rock pits on the landscape, most direct and indirect visual effects are very limited to where the pit can be seen from forest roads. Out of the proposed 21 pits, there are 8 pits that are located within 0.5 miles of major travelways or trails. Most of the pits that are located next to a major roadway, recreation site, or trail were initially used to provide material to construct these same roadways, recreation site, or trail. Often the rock pit was built very near the road or trail but in an area not visible to provide for a convenient material source without affecting the viewshed.

Mining and processing activities that occur at any of the pits within 0.5 miles of scenic routes or major travelways, or within 0.5 miles of recreation resource areas, could cause adverse, temporary effects. The importance of these effects can be evaluated in terms of their consistency with Scenic Integrity Objectives (SIOs). Actively mined pits are consistent with the SIO of "moderate" since the landscape may appear slightly altered and the pits are visually subordinate when viewed from distances of greater than 0.5 miles, which is the breakpoint between the foreground and middle-ground distances (USDA FS 1996). In situations where a proposal does not meet scenic integrity objectives or visual quality objectives, the Forest Plan allows for "one classification movement downward… (USDA FS 1987, p. 60)".

Alternative 3 – Focused Alternative

Direct and Indirect Effects

Effects on visually sensitive areas and consistency with SIO's would be of the same type as described for Alternatives 1 and 2. As discussed for Alternative 2 – Modified Proposed Action, proposed activities would result in some adverse effects on SIOs.

Effects from Use of In-Woods Processing and Storage Sites

A total of 12 in-woods processing sites are proposed for consideration in this project. Tasks carried out at processing sites includes drying, debarking, chipping stems and bark, cutting logs, manufacturing and sorting logs to size, producing wood cants, scaling and weighing logs and creating poles from suitable sized logs. Equipment types commonly used at processing sites include circular or band saws, various sizes and types of front-end loaders, log loaders and chippers of several types and may include processors, planers and mechanized cut to length systems, associated conveyers and log sorting bunks for accumulation and storage of logs. Electric motors and gas or diesel generators are also used to provide power.

Eight processing sites were proposed and analyzed for environmental effects in the Cragin Watershed Protection Project. These sites carried forward for potential use in implementing the Rim Country Project. An additional 12 processing sites are being analyzedthat range in size from 4 to 21 acres. Table 20 lists the 12 proposed sites, with approximate acreage and analysis summary. Figure 18 displays the SIOs and the areas where the proposed processing sites are located in relation to major travelways. Most processing

sites are located in forested areas making them difficult to view even from a foreground distance (300 feet to 0.5 miles).

These sites were screened so as to be located outside of meadows where some of the most productive forest soils are found, and in relatively flat areas. Other sites are located in existing clearings and flat areas. The siting of processing sites in relatively flat areas would minimize the need for extensive site grading. Processing sites were located to provide for a buffer of 100 or 300 feet from Forest roads and state highways to provide for visual screening from Concern Level 1 and 2 travel ways. Site boundaries are approximate and may be further modified during implementation and layout.

The processing sites may be used as part of the 4FRI Rim Country Restoration project over its implementation period. Following completion of use of processing sites and removal of all equipment and materials, site rehabilitation would have to be accomplished including but not necessarily limited to removal of aggregate, restoration of pre-disturbance site grades, decompaction of soil for seedbed preparation, and seeding and mulching of the site with native grasses and forbs.

Table 20. Proposed in-woods processing sites

Site Name	Ranger District	Size (ac)	Recreation Sites?	Visual Screen/Concern
Coconino				
137 / 96	Mogollon Rim	18	No concerns.	No concerns (locate to provide for a buffer of 100 or 300 feet from forest roads and state highways).
145A / 9615X	Mogollon Rim	7	No concerns.	No concerns (locate to provide for a buffer of 100 or 300 feet from forest roads and state highways).
294 / 294D	Mogollon Rim	18	No concerns.	No concerns. Located approx. 0.7 miles from Arizona Trail in valley, but in Modification VQO.
81 / 81E	Mogollon Rim	7	No concerns.	No concerns (locate to provide for a buffer of 100 or 300 feet from forest roads and state highways).
9364L / FH3	Mogollon Rim	21	No concerns.	High concern. Located in High Scenic Integrity Area without much tree coverage/screening potential. Would be viewed from FH3. This part UNSUITABLE. Western half of proposed area would be more ideal as farther from the road and in moderate SIO.
9731G / Hwy87	Mogollon Rim	9	No concerns.	No concerns (locate to provide for a buffer of 100 or 300 feet from forest roads and state highways).
Site Name	**Ranger District**	**Size (ac)**	**Recreation Sites?**	**Visual Screen from Road**
Tonto				
117 / 1321	Payson	4	No concerns.	No concerns (locate to provide for a buffer of 100 or 300 feet from forest roads and state highways).
582 / Hwy87	Payson	5	No concerns.	No concerns (locate to provide for a buffer of 100 or 300 feet from forest roads and state highways).
74 / 64	Payson	8	No concerns.	No concerns (locate to provide for a buffer of 100 or 300 feet from forest roads and state highways).
288/2781	Pleasant Valley	4	No concerns.	High concern. Located in Retention Visual Quality Area along From Desert to Tall Pines Scenic Byway. Activity related to processing sites may be visible from foreground/ middleground/ background. However, footprint of the canopy opening is existing from previous activity and located in dense forest canopy. If selected, locate to provide for a buffer of 100 or 300 feet from road.
3238 / 512	Pleasant Valley	20	No concerns.	No concerns (locate to provide for a buffer of 100 or 300 feet from forest roads and state highways).
609 / 1938	Pleasant Valley	7	Entrance to site used heavily by recreationists.	Incomplete visual data for analysis, but moderate concern of visibility from high use road by recreationsists. Locate to provide for a buffer of 100 or 300 feet from forest roads and state highways.

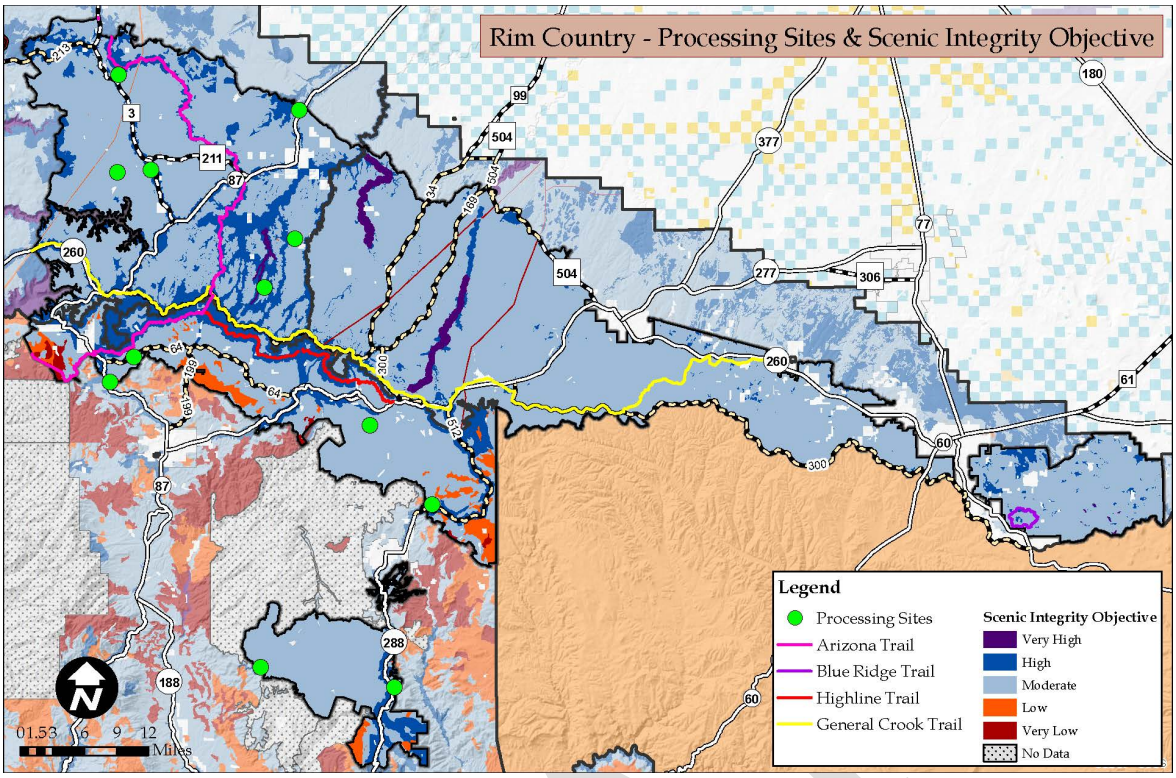

Figure 17. Potential In-Woods Processing Site Locations

Alternative 1 - No Action

Alternative 1 proposes no in-woods processing sites and storage sites and initiates no human-caused changes to the scenic quality within the project area. Alternative 1 would meet the adopted High, Moderate, and Low SIOs throughout the project area as it does not create any unnaturally appearing elements of form, line, color, or texture.

Alternative 2 – Modified Proposed Action

Direct and Indirect Effects

The scenic integrity objectives, adjacent scenic resources and the visibility of the proposed processing sites were considered from foreground, middle ground and background perspectives. The highest level of detail would likely be perceived from the foreground perspective. However, due to the size and scale of the sites, particularly those with larger acreage, there is a potential for the proposed openings and associated infrastructure to be seen from a distance from sensitive viewing platforms. Thinning around the edges of the processing site boundaries would promote a more naturally appearing landscape when these sites are seen from a distance.

Low interim SIOs would be assigned to these locations during implementation. During implementation, the proposed processing sites would likely be noticeable to the casual observer and depending on the perspective of the viewer, may dominate the view. Visitors would notice the lack of vegetation and the aggregate surface. Built structures such as fencing, sanitation facilities, office trailers, fuel storage containers, or other temporary structures would likely be noticeable to the casual observer. Heavy equipment, such as circular or band saws, various sizes and types of front-end loaders, log loaders and chippers, timber processors, planers and mechanized cut to length systems, associated conveyers and log

sorting bunks for accumulation and storage of logs may be highly visible from sensitive viewing platforms. For safety, most of the equipment would likely be a yellow color to ensure visibility for the workers, this would create a notable contrast for visitors. The concentration of logs for sorting and drying would be evident to visitors to the near vicinity. Design criteria ensures that SIOs are met post implementation and effects on Scenery are minimized during implementation to the extent practicable. Due to the potential for the soils to be heavily compacted form the operations at these sites, recovery post implementation may take up to 10 years, depending on the duration and extent of usage of the processing site. The SIOs would be met after the sites have been reclaimed and restored to a naturally appearing landscape character- likely 10 years post implementation.

Alternative 3 – Focused Alternative

Direct and Indirect Effects

Effects on visually sensitive areas and consistency with SIO's would be of the same type as described for Alternative 2 as all proposed in-woods processing sites could potentially be utilized. As discussed for Alternative 2 – Modified Proposed Action, proposed activities would result in some adverse effects on SIOs.

Effects from Forest Plan Amendment(s)

The purpose of Amendment 1 is to bring Alternatives 2 and 3 into alignment with the revised Mexican Spotted Owl Recovery Plan and defer monitoring to the FWS biological opinion that is specific to this project. Amendment 2 clarifies existing direction related to managing canopy cover and interspace in the Forest Plan. The purpose of Amendment 2 is to bring the project into alignment with the best available science that provides desired conditions for restoring fire-adapted ponderosa pine in the Southwest. Amendment 3 removes the restrictive language related to 40 percent slopes and the language identifying slopes above 40 percent as inoperable, to allow mechanical treatments with new methods and equipment on slopes greater than 40 percent without adverse environmental effects (Rim Country Summary, Chapter 1 pp.viii, ix).

The significance of each amendment was evaluated in accordance with Forest Service Manual (FSM) 1926.51 and FSM 1926.52. No amendment alters multiple use forest plan goals and objectives, or adjusts management area boundaries or management prescriptions. The changes in standards and guidelines are considered to be minor because they reflect the latest, best available science (Reynolds et al. 2013). The amendments bring the alternatives into alignment with the revised Mexican Spotted Owl Recovery Plan. No amendment would alter the long-term relationship between levels of multiple-use goods and services originally projected for the Tonto NF. These outputs were specific to a planning period ranging from 10 to 15 years (as identified in 1987) (Rim Country Summary, Chapter 1 pp.viii, ix).

With the proposed nonsignificant forest plan amendments, Alternatives 2 and 3 are consistent with the direction in the 1985 Tonto Forest Plan as amended (Rim Country Summary, Chapter 1 pp.viii, ix), therefore, would not have any measurable direct or indirect effects on scenery.

Irreversible and Irretrievable Commitments of Resources

There are no irreversible or irretrievable commitments related to scenery resources from the alternatives.

Comparison of Alternatives for Scenic Resources

Alternative 1	Alternative 2	Alternative3
In the short term, the scenic integrity will remain unchanged. In the long term, there is a potential if dense stands foster insect outbreaks, increased dwarf mistletoe spread or other forest health concerns, that there will be a reduction of scenic integrity. If stand replacing wild fire were to occur, this would also result in the loss of valued scenic character as views of a fire altered landscapes may begin to dominate.	In the short term, the scenic integrity is likely to be reduced while project activities (e.g. temporary road construction and reconstruction, rock pits, landings and in-woods processing sites) takes place. Scenic Integrity should increase once the appearance of slash and ground disturbing activities diminished, roads rehabilitated and the trees have matured. In the long term, this alternative would improve the stability of scenic resources by reducing fuel loads and lead the landscape toward the desired landscape character.	Alternative 3 would have similar effects as those described in Alternative 2 except the short term effects are expected to be less than Alternative 2 due to fewer acres being proposed for treatment. The acres not proposed for treatment in this alternative will retain the same degree of potential for insect and mistletoe outbreak and wildfire risk as under the No Action Alternative.

Figure 18. Comparison of Alternatives for Scenic Resources

Compliance with Forest Plans, Other Relevant Laws, Regulations,Policies and Plans

The proposed action alternatives is designed in accordance with all applicable plan standards and consistent with plan guidelines for scenery management. The project is designed to make progress toward attaining the desired conditions over the long-term, even though the project will have adverse but short-term effects.

To ensure compliance with forest plan direction, wild and scenic rivers identified on the Tonto NF include the eligible rivers reported in a 1993 Tonto eligibility study as well as those listed in the current draft eligibility report for the Tonto NF.

Any management activities proposed in eligible wild and scenic river corridors in the Rim Country project area would have the purposes of restoring natural geomorphic and ecological processes and the specific outstandingly remarkable values (ORVs) of the river (such as fish and wildlife habitat).

Refer to Appendix C for all project design features which address Forest Plan Compliance.

Other Agencies and Individuals Consulted

Brady Vandragt, Recreation Planner. Coconino National Forest, Mogollon Rim Ranger District– Participated in site visit and provided guidance for sensitive areas.

Angela Abel, Recreation Staff Officer- Acting. Tonto National Forest- Black Mesa and Lakeside Ranger District – Participated in site visit and provided guidance for sensitive areas.

Greg Schuster, Recreation Planner. Tonto National Forest- Payson Ranger District

Acronyms

BMP - Best Management Practices

DSC – Desired Scenic Character

NRV – Natural Range of variation

SIO - Scenic Integrity Objectives

SMS – Scenery Management System

VQO – Visual Quality Objectives

Glossary

Distance Zones - Areas of landscapes (foreground, middleground, or background) denoted by specific distances from the observer. Distance zones are used as a frame of reference in which to discuss landscape characteristics or activities of humans.

Foreground (Fg) - The detailed landscape typically found within zero to one-fourth mile of the observer.

Middleground (Mg) - The space between the foreground and background in a viewed landscape. The area is usually located from one-fourth through one-fourth to 3 through 5 miles from the observer.

Background (Bg) - The distant part of a landscape or surroundings, especially that behind something which provides harmony or contrast. Background is usually located 3 to 5 miles from the observer.

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