Apache-Sitgreaves National Forests Wilderness Evaluation Report

Coal Creek Potential Wilderness

PW-03-01-057

October 2012

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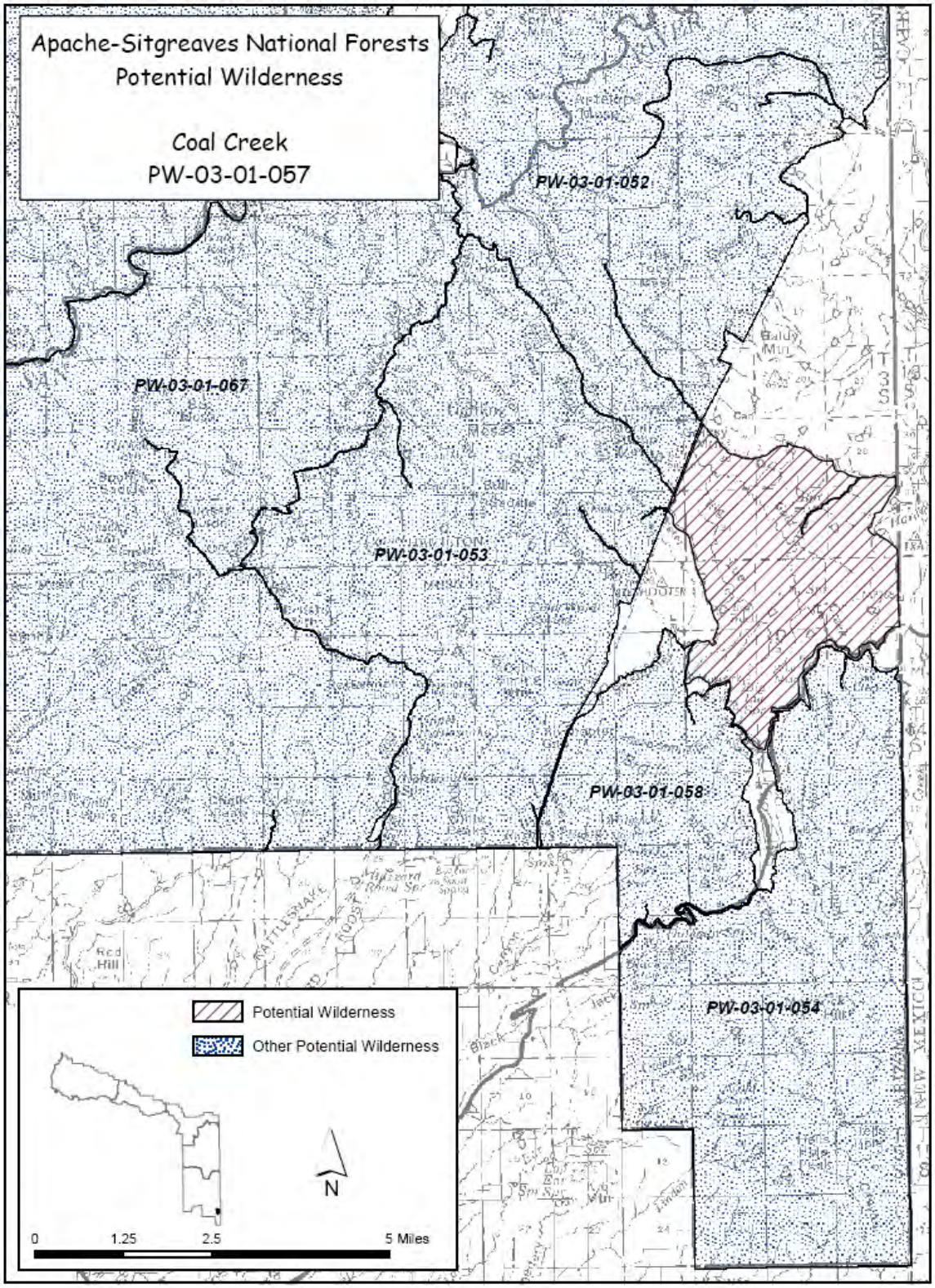

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Introduction

As part of the Forest Plan Revision process for the Apache-Sitgreaves National Forests (Apache-Sitgreaves NFs), the Forest Service has prepared this Wilderness Evaluation Report for the Coal Creek potential wilderness.

Purpose
The Forest Service must evaluate all lands possessing wilderness characteristics for potential wilderness during plan revision. Completion of a potential wilderness inventory and evaluation is an essential step in the plan revision process. Wilderness is a special area designation that the Forest Service must consider during plan revision. If an area is recommended for wilderness designation, then the revised plan would contain desired conditions, objectives, guidelines, and/or standards that would protect its wilderness characteristics.

The Process
The wilderness evaluation process began with an inventory of potential wilderness, which includes areas of federal land over 5,000 contiguous acres and other areas that meet the criteria in FSH 1909.12, Chapter 70, Section 71, and then determined if those areas meet the definition of wilderness. Once a list of potential wilderness areas was created, each area was evaluated for capability, availability, and need. These evaluation factors are described in the introduction to each evaluation step and in Appendix A. This report summarizes the wilderness capability, availability, and need evaluations based on the best available information. This report also presents the potential effects of a wilderness or nonwilderness recommendation.

The Apache-Sitgreaves NFs will use this report to determine whether or not to make a preliminary administrative recommendation for wilderness designation for the Coal Creek potential wilderness. The Responsible Official's (Regional Forester) recommendation will be documented in the final revised Plan and the Environmental Impact Statement Record of Decision. Public comments on this report will be accepted and considered throughout the plan revision process. If a potential wilderness is recommended for wilderness, the recommendation will receive further review by the Chief of the Forest Service and the Secretary of Agriculture. If the Chief of the Forest Service intends to move forward with a wilderness recommendation, the Forest Service will complete a detailed analysis of the trade-offs and impacts in accordance with the National Environmental Policy Act, including further public review and comment. Ultimately, only Congress has the authority to designate wilderness.

Background

Name	Coal Creek
Number	PW-03-01-057
Acres	5,698
Ranger District	Clifton
History (if applicable)	N/A
Location, Vicinity, and Access	Approximately 12 miles east-southeast of Clifton, Arizona, in Greenlee County. It is located in the Apache-Sitgreaves NFs in extreme eastern Arizona. Primary access is via State Highway (SH) 78 and Forest Road (FR) 212.
Geography and Topography	The area is characterized by rolling pine and oak-covered terrain which is dissected by deep canyons. The potential wilderness includes Coal Creek and Big Lue Canyons. Elevations range from less than 5,000 feet along Coal Creek to over 6,200 feet near the east boundary.
Surroundings	FR 212[1] and a power line corridor delineate the west boundary. Minor forest roads[2] form the north boundary and a portion of the east boundary. The Arizona/New Mexico state line marks most of the east boundary. State Highway 78, two pieces of private land[3], and thinning units define the south boundary. The SH 78 corridor and private lands separate this area from Hells Hole potential wilderness (PW-03-01-054) to the southeast. The FR 212 corridor separates Coal Creek potential wilderness from Big Lue Mountains potential wilderness (PW-03-01-058) to the southwest. A power line corridor separates this potential wilderness from West Blue/San Francisco and Cold Spring Mountain potential wildernesses (PW-03-01-052 and PW-03-01-053, respectively).
Special Designation	The Coal Creek eligible Wild and Scenic River (WSR) is partially within the potential wilderness.
Vegetation	A mosaic of vegetation communities is found within Coal Creek potential wilderness. Vegetation types include Madrean pine-oak woodland, semi-desert grassland, and cottonwood-willow and mixed broadleaf deciduous riparian forests.
Appearance and Key Attractions	The area is characterized by rolling pine and oak-covered terrain which is dissected by two 800-foot deep canyons. Key attractions are scenery and wildlife for hunting and viewing.

[1] Roads may be bounded on one or both sides by the potential wilderness. Where a road is bounded on both sides, a non-potential wilderness corridor or "cherrystem" surrounds the road.
[2] Forest roads along the north and east boundaries include 4084, 8384, 8385, and 8386. Roads that end at the potential wilderness boundary are not listed.
[3] 1) T 04 S, R 32 E, section 8 and 2) T 04 S, R 32 E, sections 17 and 18.

CURRENT USES

Recreation

Current recreation activities are hiking, horseback riding, hunting, and viewing scenery and wildlife. There are no developed recreation sites within the area. Bear Track Picnic Area and Blackjack and Coal Creek Campgrounds are just outside the potential wilderness. There are no trails. Most of the area has a recreation emphasis of Semi-Primitive Motorized, with the remainder Roaded Natural.

Recreation is a WSR Outstandingly Remarkable Value (ORV) for Coal Creek because horseback riders are able to traverse the entire river corridor.

Wildlife

Large wildlife species found in the area include mule deer, elk, black bear, and mountain lion. A variety of small animals and birds also inhabit the area.

Fish habitat is a WSR ORV for Coal Creek because it is likely habitat for the endangered Gila chub. Wildlife species and habitat are also WSR ORVs for Coal Creek because the creek supports one of three known populations of the threatened Chiricahua leopard frog. The entire river corridor also provides habitat for Neotropical migratory birds. The potential wilderness is within the secondary Mexican wolf recovery zone.

Range

The potential wilderness is within the Blackjack and Harden Cienega (administered by the Gila NF) Allotments. There are 9.4 miles of fence in the area: 2.9 miles of allotment boundary (of which 0.1 miles are forests boundary) and 6.5 miles of interior fence.

Water

Wild, Recreational, and Scenic sections of the eligible Coal Creek WSR are within the potential wilderness. Other streams are intermittent or ephemeral. There are ten stock tanks and one developed spring in the area.

Special Uses

Tucson Electric Power has a power line right-of-way (ROW) that borders the northwestern edge of the potential wilderness. The ROW is periodically maintained per the terms and conditions of the permit.

Minerals

As of 4/18/2009, there are no mining claims, mineral districts, mineral withdrawals, or coal, oil, gas, or geothermal leases in the potential wilderness.

Cultural Resources

There are no known prehistoric or historic resources.

Fire

Eight fires (most smaller than ¼ acre and the largest approximately 50 acres) occurred between 1976 and 2008. Most were caused by lightning; the others were arson and smoking.

Capability Evaluation

Wilderness capability describes the basic characteristics that make the area appropriate and valuable for wilderness designation, regardless of the area's availability or need. Five factors are used to determine capability: naturalness, level of development, opportunities for solitude or primitive and unconfined recreation, special features, and the ability of the Forest Service to manage the area as wilderness. The first four factors consider how the current conditions of the potential wilderness fit the definition of wilderness. Manageability is slightly different because it evaluates features of the area that would make it more or less difficult to manage as wilderness, such as size, shape, and juxtaposition to external influences. The following summarizes the information found in Appendix B.

Summary

Natural
High
The potential wilderness is essentially natural and the diversity of vegetation and wildlife species is a key feature. Vegetation includes Madrean pine-oak woodland, semi-desert grassland, and cottonwood-willow and mixed broadleaf deciduous riparian forests. The potential wilderness provides habitat for a variety of animal species including Gila chub and Chiricahua leopard frog. There are no perennial streams, known impoundments, or water quality concerns. Coal Creek is an eligible WSR with proposed classifications of Wild, Scenic, and Recreational. Mullein, a non-native plant, is found along area roads, but there are no records of the plant within the potential wilderness. Weeping lovegrass, also a non-native plant, is also found along the eastern portion of the south boundary road (AZ 78). Other non-native species may be present, but no surveys have specifically been conducted in the area. The night sky is not affected by nearby ranch lights.
Undeveloped
High
There is little evidence of human activity in the potential wilderness other than fences and stock tanks.
Outstanding Opportunities for Solitude or Primitive and Unconfined Recreation
High
The potential wilderness has outstanding opportunities for primitive and unconfined recreation because of the area's size, rugged terrain, and lack of trails. Recreation opportunities include hiking, horseback riding, hunting, wildlife viewing, and photography. There are opportunities for solitude, especially in the canyons, but the signs of civilization are visible along the south and northwest boundaries.
Special Features and Values
High
Special features and values include canyons, high potential for ecological research, and habitat for endangered and threatened aquatic species.

Manageability
Low
The potential wilderness could be managed to protect its wilderness character, but access to the area is good. There are several roads that are bounded of both sides by the potential wilderness. Overall, terrain and vegetation minimize motor vehicle use.
OVERALL CAPABILITY
High

Potential Boundary Changes

No boundary changes have been identified for this potential wilderness.

Availability Evaluation

Availability criteria indicate the availability of a potential wilderness for wilderness designation by describing other resource and land use potentials for the area. Availability examines the potential impact of designating an area as wilderness to both the current and future land uses and activities. In essence, it is a summary of the trade-offs between wilderness and other uses. The following summarizes the information found in Appendix C. The letters below in parenthesis refer to the following required considerations: **a**. recreation, including tourism; **b**. wildlife species, populations, and management needs; **c**. water availability and use; **d**. livestock operations; **e**. timber; **f**. minerals; **g**. cultural resources; **h**. authorized and potential uses; and **i**. management considerations including fire, insects, disease, and presence of non-Federal lands.

Summary

Water Yield (c)

High

The area is of value for water yield. However, no impoundments are needed.

Habitat Management (b)

High

Ongoing recovery actions for Chiricahua leopard frog include annual surveys and identification of suitable colonization sites and refugia. Additional Chiricahua leopard frog populations may be established in existing or maintained stock tanks.

Aquatic Restoration (b)

High

Additional Chiricahua leopard frog populations may be established in existing or maintained stock tanks.

Vegetation Restoration (e, h, i)

Medium

Prescribed fire and mechanical thinning are needed over the next 10 years to restore the Madrean pine-oak woodland ecosystem.

Public Access Needed (a, g)

High

There are no unique characteristics that would require developed public access.

Land Use Authorizations (d, h, i)

Low

Current permitted grazing use and the ability to use motorized equipment and tools within the area to maintain range developments is critical to the operation and effectiveness of grazing management. There are a power line corridor adjacent to (not within) the potential wilderness on the northwest and a road corridor along the southeast boundary.

Adjacent Non-FS Lands (i)

Medium

There are private lands adjacent to the potential wilderness along the south and east boundaries.

Cultural Resources (g)
High
There are no known sites needing stabilization. Motorized vehicle access to any TCPs or sacred sites is not needed.
Minerals (f)
High
There is a low potential for future mineral uses.
OVERALL AVAILABILITY
High

Need Evaluation

The evaluation criteria below indicate how the potential wilderness might fit into the National Wilderness Preservation System, which includes all wilderness areas in the United States. Need is considered at the regional level and must incorporate public participation. The criteria used to evaluate need include consideration of other wilderness and nonwilderness areas that provide opportunities for unconfined outdoor recreation or preservation of certain ecosystem characteristics. The following summarizes the information found in Appendix D.

Summary

Factor 1 - The location, size, and type of other wildernesses in the general vicinity and their distance from the proposed area. Consider accessibility of areas to population centers and user groups. Public demand for wilderness may increase with proximity to growing population centers.

Low

There are significant wilderness lands (over 2.5 million acres) on the Apache-Sitgreaves NFs and within a 100-mile radius of Coal Creek potential wilderness and the forests. There are more than 1 million acres of Wilderness within a 130-mile radius of Tucson.

Factor 2 - Present visitor pressure on other wildernesses, the trends in use, changing patterns of use, population expansion factors, and trends and changes in transportation.

High

The potential wilderness would respond to a need for additional wilderness based on projected population increases, high use in two of the three Wilderness areas on the forests, underrepresentation of northeast Arizona in the National Wilderness Preservation System, and its location within a 130-mile radius of Tucson.

Factor 3 - The extent to which nonwilderness lands on the NFS unit or other Federal lands are likely to provide opportunities for unconfined outdoor recreation experiences.

Low

There are significant nonwilderness lands (over 5.4 million acres) available for unconfined outdoor recreation outside of designated Wilderness and the Blue Range Primitive Area on the Apache-Sitgreaves NFs and within a 100-mile radius of the forests. There are also significant nonwilderness lands (over 2.8 million acres) available within a 130-mile radius of Tucson.

Factor 4 - The need to provide a refuge for those species that have demonstrated an inability to survive in less than primitive surroundings or the need for a protected area for other unique scientific values or phenomena.

Medium

There are one Forest Planning Species (FPS) and habitat for three additional FPS that would benefit from primitive surroundings.

Factor 5 - Within social and biological limits, management may increase the capacity of established wildernesses to support human use without unacceptable depreciation of the wilderness resource.

Medium

Of the three wilderness areas on the Apache-Sitgreaves NFs, only Bear Wallow Wilderness could accommodate some increased use without affecting wilderness resources.

Factor 6 - An area's ability to provide for preservation of identifiable landform types and ecosystems. Consideration of this factor may include utilization of Edwin A. Hammond's subdivision of landform types and the Bailey-Kuchler ecosystem classification. This approach is helpful from the standpoint of rounding out the National Wilderness Preservation System and may be further subdivided to suit local, subregional, and regional needs.

High

Three underrepresented ecosystems (cottonwood-willow riparian forest, Madrean pine-oak woodland, and mixed broadleaf deciduous riparian forest) occur across 82 percent of this potential wilderness. One underrepresented landform (Burro Mountains oak-juniper woodland) occurs across 7 percent of the area.

OVERALL NEED

Medium

Effects of Recommendations

	RECOMMENDATION	
	WILDERNESS	**NONWILDERNESS**
MANAGEMENT DIRECTION	**Manage to protect and maintain wilderness characteristics**	**Manage for multiple use, ecosystem restoration, and social and economic values**
Wilderness Characteristics	**EFFECTS ON WILDERNESS RESOURCES AND VALUES**	
Natural Undeveloped Outstanding Opportunities for Solitude or Primitive and Unconfined Recreation Special Features and Values	Wilderness characteristics would be maintained and protected. The area would remain natural and generally undeveloped. Outstanding opportunities for solitude or primitive and unconfined recreation would continue to be present. Any existing special features and values would be protected.	Wilderness characteristics would be diminished by management activities, other than burning. Obvious signs of activities would cause the area to be removed from potential wilderness.
Resource/Use	**EFFECTS ON OTHER RESOURCES AND USES**	
Soils	Long-term soil productivity may increase because the acreage is generally not available for management activities. Shorter-term risks to soil productivity may be increased until fire-adapted ecosystems (especially ponderosa pine) are restored. Soil erosion risk would be reduced.	The natural functions of watersheds could be affected by activities. The threat of soil erosion from associated motorized uses and land-disturbing activities would increase with the degree of use. However, mitigation would be required. Compaction from recreation uses in popular areas would likely continue. Treatments may reduce soil loss by reducing the risk of uncharacteristic wildfire.

	RECOMMENDATION	
	WILDERNESS	**NONWILDERNESS**
MANAGEMENT DIRECTION	**Manage to protect and maintain wilderness characteristics**	**Manage for multiple use, ecosystem restoration, and social and economic values**
Water Quality and Quantity	The natural functions of watershed systems would be maintained. The risk of human-caused alterations, other than fire, affecting the watershed condition would be primarily limited to localized recreation activities. There could be short-term risks to watersheds until fire-adapted ecosystems (especially ponderosa pine) are restored. Water quality would more likely be affected by management outside of wilderness.	Water quality could be affected by management activities. However, mitigation would be required to reduce effects to water quality. Management activities could be conducted to increase water yield. Treatments may reduce sedimentation by reducing the risk of uncharacteristic wildfire.
Air Quality	There would be no direct effects to air quality specifically from wilderness designation. Wilderness designation would not preclude the use of planned or unplanned ignitions to accomplish specific resource objectives, which may result in short-term air quality impacts.	There may be some short-term direct effects to air quality from fugitive dust from product removal and smoke from slash disposal. Planned or unplanned ignitions could result in short-term air quality degradation.
Wildlife Habitat	Wilderness designation would provide greater protection for wildlife and wildlife habitat. Wildlife would not be harassed by motorized uses and habitat fragmentation would be minimized. Repair and replacement of existing wildlife improvements may be allowed, but new improvements and habitat enhancements would be rare and would be authorized only to protect and improve management of the wilderness resource.	Vegetation treatments may result in a greater mosaic of habitat types and associated species diversity. Opportunities to restore and/or manipulate habitat would be available. There could be some wildlife harassment from motorized use. Fragmentation and loss of habitat from road construction may occur with increased activities.
Aquatic Restoration	Natural processes would primarily affect aquatic species and their habitat. Motorized and mechanized travel and many management activities would not be allowed. Natural events and climatic variation would influence sedimentation, riparian vegetation, and nutrient cycles. Opportunities to do riparian area restoration may be precluded.	Natural processes that affect aquatic habitats would be interrupted to a degree commensurate with activities. Motorized uses, road construction, and other land-disturbing activities may increase sedimentation and potentially adversely affect riparian habitat and nutrient cycles. However, the use of BMPs would mitigate most effects.

	RECOMMENDATION	
	WILDERNESS	**NONWILDERNESS**
MANAGEMENT DIRECTION	**Manage to protect and maintain wilderness characteristics**	**Manage for multiple use, ecosystem restoration, and social and economic values**
Vegetation	Natural ecological succession would be allowed to continue and, over time, restore ecological conditions. Levels of insect infestation and disease could reach endemic levels as ecological systems move toward their historic ranges of variability. Dispersal of non-native plants would generally be limited to trail systems and river corridors. Plant diversity would be slow to change, but would move towards a dominance of mature trees and late successional habitats.	Natural ecological succession could be interrupted by activities associated with other resource management objectives. Incidents of insects and disease would still occur, but would be more aggressively prevented or managed through vegetation treatment practices. The ability to detect and treat infestations would be greater than in wilderness and thus infestations could be prevented or contained earlier. Plant diversity would depend on the management objectives for the area.
Insects and Disease	Forest stands would be more likely to be over-mature and provide areas suitable for insect and disease outbreaks. Insect or disease control would not be permitted unless necessary to prevent unacceptable damage to resources on adjacent lands or unnatural loss to the wilderness resource from exotic pests. When necessary, control measures would have the least adverse effect on wilderness.	Response to insect and disease outbreaks would be more direct and rapid. A range of control and treatment options would allow more flexibility in containing outbreaks.
Non-Native Species	Non-native plants may be treated by grubbing or with chemicals when they threaten lands outside wilderness or when they are spreading within the wilderness, provided there are no serious adverse impacts on wilderness values.	All options to address non-native plants would be available, including no treatment, hand pulling, herbicides, and biological control. Motorized and mechanized equipment can be used.

	RECOMMENDATION	
	WILDERNESS	**NONWILDERNESS**
MANAGEMENT DIRECTION	**Manage to protect and maintain wilderness characteristics**	**Manage for multiple use, ecosystem restoration, and social and economic values**
Recreation	Recreation use is managed to minimize the evidence of human use and provide outstanding opportunities for solitude and primitive recreation. Only primitive, non-mechanized access and recreation activities are permitted. Only those facilities required for the safety of users and protection of wilderness resources are provided. The use of mechanized tools for trail construction and maintenance would be restricted. In many cases, wilderness designation has elevated an area's visibility to the public, increasing its popularity and recreation use. Increased use can result in increased damage to trails and other resources, as well as reduced opportunities for solitude and other wilderness values.	Activities can reduce the primitive or semi-primitive recreational character through altered recreation settings, experiences, and access. The sights and sounds of human presence are usually increased by activities. Recreationists seeking a primitive or semi-primitive experience would choose not to visit such an area. Activities may also provide greater recreational access and more motorized and mechanized recreation experiences would be available.
Visual Quality	Visual quality would be protected because ground-disturbing activities would be extremely limited. The Scenic Integrity Objective would be Very High. The long-term scenic characteristics would be representative of how the landscape would appear if relatively unaffected by human activity.	The Scenic Integrity Objective would range from Low to High. There would be a greater potential for landscapes to show obvious signs of human activities. Scenic Integrity Objectives would constrain or modify activities to mitigate adverse effects to scenic resources, especially in areas seen from major recreation facilities and Scenic Byways.
Cultural Resources	Cultural resources are already protected by law. Exclusion of ground-disturbing activities lessens threats to known and unidentified cultural resources. Fewer sites or resources may be identified.	Cultural resources are already protected by law. Project-level inventories associated with ground disturbing and other activities may increase identification of previously unknown sites or resources. Mitigation measures would be applied at the project level.

	RECOMMENDATION	
	WILDERNESS	**NONWILDERNESS**
MANAGEMENT DIRECTION	**Manage to protect and maintain wilderness characteristics**	**Manage for multiple use, ecosystem restoration, and social and economic values**
Special Use Authorizations	Structures and other developments would be limited to those actually needed for management, protection, and use of the wilderness for the purposes for which the wilderness was established.	Special use authorizations would be allowed, subject to suitability.
Range	Grazing allotments and developments would be managed under the Congressional Grazing Guidelines and allotment management plans.	Grazing allotments would continue to be managed under current allotment management plans, laws, policies, and regulations.
Forest Products	Wilderness would be removed from the suitable timber base. No timber sales or fuelwood cutting would be permitted. Only fuelwood collection incidental to recreation would be allowed.	Timber production may be allowed, subject to suitability, law, policy, and regulation. Forest products, commercial and non-commercial, could be a byproduct of the restoration treatments.
Minerals	The area would be withdrawn from further mineral entry and leasing. Mineral development is possible in areas with valid existing rights. Consistent with the valid existing rights, operating plans would incorporate reasonable terms and conditions for the protection of the wilderness character, and provide for restoration as near as practicable of the disturbed lands promptly upon abandonment of operations.	These lands would be open to oil, gas, geothermal, and mineral development except where specifically withdrawn or restricted for other purposes. Although a full range of activities and methods may be allowed and employed, developments and activities would be mitigated to reduce adverse impacts to other resources.
Special Designations	Wilderness designation would increase the number and diversity of areas within the Southwestern Region and the National Wilderness Preservation System. There would be no effects to other special designations - the most restrictive management would apply.	The opportunity to recommend additional wilderness within the Southwestern Region would be foregone at this time. There would be no effects to other special designations. Any restrictions associated with other special designations could affect management activities.

	RECOMMENDATION	
	WILDERNESS	**NONWILDERNESS**
MANAGEMENT DIRECTION	**Manage to protect and maintain wilderness characteristics**	**Manage for multiple use, ecosystem restoration, and social and economic values**
Fire	Wilderness designation does not preclude the use of planned or unplanned ignitions to accomplish specific resource objectives. Mechanical treatments and timber harvest would not be allowed, which may increase the risk of uncharacteristic wildfires. Suppression actions would be guided by Minimum Impact Suppression Tactics (MIST).	The risk of uncharacteristic wildfires would be reduced because of the opportunities to treat mechanically and harvest timber. The full range of suppression tactics and management approaches would be available for use.
	SOCIAL AND ECONOMIC EFFECTS	
	Local population numbers, income, or employment would generally not be affected.	Local population numbers, income, or employment would not be affected unless major mineral activity occurs.
	Costs related to the maintenance of range facilities could increase because of limitations on methods.	There would be no increased costs associated with the construction and maintenance of range facilities.
	Timber production revenues could be foregone, if any commercial stands are suitable and harvestable.	Revenues and jobs from timber production could increase, if any commercial stands are suitable and harvestable.
	Local lifestyles would not be affected unless major mineral activity occurs.	Local lifestyles would not be affected unless major mineral activity occurs.
	Revenues associated with mineral development would be foregone, because the lands would be withdrawn from mineral entry.	Revenues could be generated, if minerals are found and developed.
	Wilderness is recognized as contributing to healthy economies and healthy lifestyles. Direct benefits are derived from primitive recreation and as a “quality-of-life” factor to attract new businesses and residents. The wilderness characteristics/values that attract visitors to the area would be maintained.	Management activities would contribute to local lifestyles and healthy economies. The wilderness characteristics/values that attract visitors to wilderness would be affected.

	RECOMMENDATION	
	WILDERNESS	**NONWILDERNESS**
MANAGEMENT DIRECTION	**Manage to protect and maintain wilderness characteristics**	**Manage for multiple use, ecosystem restoration, and social and economic values**
	Ecosystem services (natural processes such as the air and water purification functions of undisturbed lands) would be protected and maintained.	Ecosystem services could be decreased with increased activities.
	Opportunities for primitive recreation and public awareness of the values associated with wilderness, including spiritual and natural qualities, would be increased.	Opportunities for primitive recreation would decrease. Opportunities for semi-primitive and more developed recreation could increase.

Appendix A: Wilderness Evaluation Process

The following is summarized from Forest Service Handbook 1909.12, Chapter 70. This process is used by the Forest Service to determine whether there are areas that could be recommended for wilderness designation by Congress. The process includes three steps: an inventory of potential wilderness areas, an evaluation of the potential wilderness areas, and a determination if a recommendation will be pursued for any potential wilderness areas.

Inventory of Potential Wilderness Areas

The first step in the evaluation of potential wilderness is to identify and inventory all areas within National Forest System Lands that satisfy the definition of wilderness found in the 1964 Wilderness Act.

Areas identified through this process are called potential wilderness areas. This inventory of potential wilderness is not a land designation. It is completed with the express purpose of identifying all lands that meet the criteria for being evaluated for wilderness suitability and possible recommendation to Congress for wilderness designation.

The inventory of areas relies on local knowledge and judgment regarding unique, site-specific conditions of each area being considered. The boundaries of areas for the potential wilderness inventory should facilitate easy on-the-ground identification.

Inventory Criteria

Areas qualify for inclusion in the potential wilderness inventory if they meet the statutory definition of wilderness and meet either criteria 1 and 3 or criteria 2 and 3 below.

1. Areas contain 5,000 acres or more.
2. Areas contain less than 5,000 acres, but meet one or more of the following criteria:
   a. Can be preserved due to physical terrain and natural conditions.
   b. Self-contained ecosystems, such as an island, that can be effectively managed as a separate unit of the National Wilderness Preservation System.
   c. Contiguous to existing wilderness, primitive areas, Administration-endorsed wilderness, or potential wilderness in other Federal ownership, regardless of their size.
3. Areas do not contain forest roads (36 CFR 212.1) or other permanently authorized roads, except as permitted in areas east of the 100th meridian (sec. 71.12).

Areas may be included in the potential wilderness inventory even though they include the types of areas or features listed in FSH 1909.12, 71.11.

On the Apache-Sitgreaves NFs, GIS was used to identify those areas that met the inventory criteria. Site-specific information was gathered from Ranger District (District) personnel to provide background information, identify features not shown in GIS, and determine where the Region 3 criteria on roaded areas, fingers, and extrusions should be applied.

Evaluation of Potential Wilderness Areas

An area recommended for wilderness must meet the tests of capability, availability, and need. In addition to the inherent wilderness quality it possesses, an area must provide opportunities and experiences that are dependent upon or enhanced by a wilderness environment. The ability of the Forest Service to manage the area as wilderness is also considered.

Capability

The capability of a potential wilderness is the degree to which an area contains the basic characteristics that make it suitable for wilderness recommendation without regard to its availability for or need as wilderness. The following characteristics are considered in evaluating a potential wilderness area:

1. Natural - an area is substantially free from the effects of modern civilization and generally appears to have been affected primarily by the forces of nature.
2. Undeveloped - the degree to which an area is without permanent improvements or human habitation.
3. Outstanding Opportunities for Solitude or Primitive and Unconfined Recreation - the capability of the area to provide solitude or primitive and unconfined types of recreation. This includes a wide range of experiential opportunities. Solitude is the opportunity to experience isolation from sights, sounds, and the presence of others from developments and evidence of humans.
4. Special Features and Values - an area is capable of providing other values such as those with ecologic, geologic, scientific, educational, scenic, historical, or cultural significance.
5. Manageability - the ability to manage an area as wilderness as required by the Wilderness Act and how boundaries affect manageability of an area.

Responses to the capability questions were drafted at the Apache-Sitgreaves NFs Supervisors Office and reviewed by District personnel. Any changes were incorporated into the capability evaluation.

If an area is found to not be capable of being wilderness (a rating of Low), it is not carried forward into the Availability Evaluation.

Availability

Areas determined to meet wilderness capability requirements are considered potentially available for wilderness designation. The determination of availability is conditioned by the value of and need for the wilderness resource compared to the value of and need for other resources. Other resource potential including current use and potential future use is analyzed for the various resources involved.

Constraints and encumbrances on lands may also govern the availability of lands for wilderness. The degree of Forest Service control over the surface and subsurface of the area is also considered. The Forest Service should have sufficient control to prevent development of incompatible uses that would negatively affect wilderness character and potential.

Responses to the availability questions were drafted by at the Apache-Sitgreaves NFs Supervisors Office and reviewed by District personnel. Any changes were incorporated into the availability evaluation.

Need

The need for an area to be designated as wilderness is determined through an analysis on a regional basis by evaluating such factors as the geographic distribution of areas and representation of landforms and ecosystems to which it contributes to the overall National Wilderness Preservation System. This need is demonstrated through a public involvement process, including public input to the evaluation report.

A set of GIS models, information papers, and analyses were provided by the Southwestern Regional Office. This information was synthesized at the Apache-Sitgreaves NFs Supervisors

Office and reviewed by District personnel. Any changes were incorporated into the need evaluation.

Documentation of Potential Wilderness Areas

Draft wilderness evaluation reports were developed for each potential wilderness; each report includes summaries of the capability, availability, and need assessments. The draft reports were made available for public comment in June 2009. Public comments were incorporated and information on the potential effects of wilderness and nonwilderness recommendations was added to the final evaluation reports. The effects of nonwilderness recommendation may be split to reflect nonwilderness, lands with roadless character, or primitive area categories.

Appendix B: Capability Evaluation Worksheet

Capability Characteristics

Natural

1. Presence of non-native species.
   High - Non-native species are not evident.
   Medium - Non-native species are evident in isolated spots.
   Low - Non-native species are common or scattered throughout the area.

   Rating: **High** - Mullein, a non-native plant, is found along the west and south boundary roads, but there are no GIS records of the plant within the potential wilderness. Weeping lovegrass, also a non-native plant, is also found along the eastern portion of the south boundary road (AZ 78). Other non-native species may be present, but no surveys have specifically been conducted in the area.

2. Rivers within the potential wilderness are in free-flowing condition.
   High - Rivers within the area are considered free-flowing.
   Medium - Some rivers have impoundments or other issues that affect their free-flowing character.
   Low - Rivers within the potential wilderness are seasonal or heavily impacted by impoundments.

   Rating: **High** - All drainages in the potential wilderness are intermittent or ephemeral. There are no known impoundments. Coal Creek is an eligible WSR with proposed classifications of Wild, Scenic, and Recreational.

3. Quality of night-sky as affected by light pollution.
   High - The night sky is clear with little to no interference from light pollution.
   Medium - Some stars are visible and there is moderate degradation from light pollution.
   Low - Few stars are visible at night and the presence of light pollution is evident.

   Rating: **High** - There are no nearby population centers and the lights from nearby ranches do not affect the night sky.

4. Presence of pollutants that degrade water.
   High - All rivers/streams have been sampled and there are no water quality issues.
   Medium - There are no known water quality issues within the area but the not all rivers/streams have been sampled.
   Low - There are rivers within the area that are listed on the State Impaired Waters List (303d).

   Rating: **Medium** - The intermittent and ephemeral streams in the potential wilderness have not been sampled. There are no known water quality issues.

5. Area provides elements of biological diversity and naturalness including unique habitats, TES or rare plants and wildlife.

High - Has critical or unique habitats and diverse ecological conditions.
Medium - Has a mix of habitats and ecological conditions.
Low - Has limited ecological conditions and habitats.

Rating: **High** - Biological diversity is moderate and essentially natural. The potential wilderness provides habitat for a variety of animal and plant species including the endangered Gila chub and the threatened Chiricahua leopard frog.

6. Area contains a variety of natural resources including a variety of tree species and structures, intermingled grasslands or meadows, numerous recreation opportunities, diversity of wildlife habitats, and wildlife, etc.

High - Diverse amount of natural resources.
Medium - Mixed amount of natural resources.
Low - Limited amount of natural resource diversity.

Rating: **Medium** - Diversity of natural vegetation and wildlife species are key natural features. Vegetation includes Madrean pine-oak woodland, semi-desert grassland, mixed broadleaf deciduous riparian forest, and cottonwood-willow riparian forest. Hiking, horseback riding, hunting, wildlife viewing, and photography are the main recreation opportunities. Wildlife species and habitat are moderately diverse.

Undeveloped

7. Area has current or past evidence of human activity.

High - Little or no evidence of human activity.
Medium - Unnoticeable or unobjectionable human activity.
Low - Obvious evidence of human activity.

Rating: **High** - There is little evidence of human activity in the potential wilderness, mostly fences and stock tanks.

Outstanding Opportunities for Solitude or Primitive and Unconfined Recreation

8. Area provides physically and mentally challenging recreation opportunities that promote adventure and self-reliance.

High - Most of the area provides challenging recreation opportunities.
Medium - Some parts of the area have the potential for challenging recreation opportunities.
Low - Few parts of the area can provide challenging recreation opportunities.

Rating: **High** - The potential wilderness's size and diversity of terrain provide physically challenging recreation opportunities.

9. Opportunity to experience solitude and isolation from human activities while recreating in the area.

High - Significant feeling of being alone or remote from civilization.
Medium - Feeling of being alone is possible but signs of civilization are likely.
Low - Little opportunity of feeling alone.

Rating: **High** - There are opportunities for solitude throughout the area, especially in the canyons. However, these opportunities are slightly diminished along the south boundary by the highway and along the northwest boundary by the power lines.

10. Opportunity to engage in primitive and unconfined recreation such as backpacking, kayaking, hunting, fishing, etc.

High - There are many opportunities for engaging in primitive recreation.
Medium - There are some opportunities for engaging in primitive recreation.
Low - There are few to no opportunities to engage in primitive recreation.

Rating: **High** - Current recreation activities include hiking, horseback riding, hunting, and viewing scenery and wildlife. Recreation is a WSR ORV for Coal Creek because horseback riders are able to traverse the entire river corridor.

Special Features and Values

11. Area contains outstanding or distinct features like rock formations, panoramic views, etc.

High - Many distinct features or few but exceptional features.
Medium - Some distinct features.
Low - One or no distinct features.

Rating: **High** - Distinctive features within the potential wilderness include Big Lue and Coal Creek Canyons and Coal Creek.

12. Area has potential for scientific research, environmental education, or historic/cultural opportunities.

High - Good potential for two or more types of these opportunities.
Medium - Potential for one type of opportunity.
Low - Little or no potential for this type of opportunity.

Rating: **Medium** - The area has potential opportunities for scientific research in regard to the special status animal species.

13. Area contains unique or rare species of plants and/or animals.

High - Area has several unique or rare plants and/or animals.
Medium - Area has a few unique or rare plants and/or animals.
Low - Area has no unique or rare plants and/or animals.

Rating: **High** - Coal Creek is likely habitat for the endangered Gila chub and supports one of three known populations of the threatened Chiricahua leopard frog. The entire river corridor also provides habitat for Neotropical migratory birds.

Manageability

14. Ability to manage the area for wilderness character, including distance and influence from outside activities; opportunity to access the area; and resource conflicts or encumbrances.

High - Isolated from areas of activity; controlled or limited access; no encumbrances or resource conflicts.
Medium - Somewhat isolated from areas of activity; adequate access opportunities; some resource conflicts and/or encumbrances.
Low - Areas of activity are nearby; many access opportunities; many resource conflicts and/or encumbrances.

Rating: **Medium** - The potential wilderness is generally isolated, but boundary roads provide access to the area. There are no known encumbrances or resource conflict.

15. Motorized use within the area.

Yes - Has motorized vehicle use.
No - Does not have any motorized vehicle use.

Rating: **Yes** - There are a few roads that are bounded on both sides by the potential wilderness. Overall, terrain and vegetation minimize motorized vehicle use.

Overall Capability: **High**

Appendix C: Availability Evaluation Worksheet

The letters below in parenthesis refer to the following required considerations: **a**. recreation, including tourism; **b**. wildlife species, populations, and management needs; **c**. water availability and use; **d**. livestock operations; **e**. timber; **f**. minerals; **g**. cultural resources; **h**. authorized and potential uses; and **i**. management considerations including fire, insects, disease, and presence of non-Federal lands.

Availability Characteristics

1. Areas that are of high value for water yield or on-site storage where installation and maintenance of improvements may be required. (**c**)

High - No impoundment needed.
Medium - Minor improvements will have an effect.
Low - Identified impoundment that will have an effect on wild characteristics.

Rating: **High** - The area is of value for water yield. However, no impoundments are needed.

2. Areas needing management for wildlife or aquatic animals that MIGHT conflict with wilderness management. (**b**)

High - Low management requirements with no motorized equipment required to meet objectives and infrequent entries.
Medium - Management requires helicopters but no motorized equipment on the ground and frequency is generally less than 10 years.
Low - Intense management (motorized equipment, helicopters, chainsaws, broadcast burning) and frequent entries (= or <5 yrs.).

Rating: **High** - Ongoing recovery actions for Chiricahua leopard frog include annual surveys and identification of suitable colonization sites and refugia. Additional Chiricahua leopard frog populations may be established in existing or maintained stock tanks.

3. Area needing active aquatic restoration activities. (**b**)

High - Properly functioning with no or little restoration activities needed.
Medium - Site-specific improvements needed.
Low - The majority of watershed needs attention.

Rating: **High** - Additional Chiricahua leopard frog populations may be established in existing or maintained stock tanks.

4. Area needing active vegetative restoration activities due to specific species survival (such as White Bark Pine restoration) or identifiable fuel reduction activity to reduce the risk of uncharacteristic wildfire or known areas of severe insect infestation that will lead to heavy tree mortality. (**e, h, i**)

High - The area needs little vegetative restoration.
Medium - Areas needing high intensity management activities for a short time period (< or = 5 years). These areas could be available for wilderness after those activities are completed (like fuel reduction activities). Some intense restoration work over small areas could be accomplished without conflicting with wilderness management (species conservation work not requiring motorized equipment).
Low - The need for vegetation restoration is a higher priority and requires long-term management and mechanized or motorized equipment.

Rating: **Medium** - Ongoing restoration activities over the next 10 years that involve prescribed fire and mechanical thinning are required to restore the Madrean pine-oak woodland ecosystem.

5. Areas having such unique characteristics or natural phenomena that general public access should be developed to facilitate public use and enjoyment. (**a, g**)

High - Does not exist or minimal development will be provided.
Medium - Requires minor development or improvement that does not qualify as a developed recreation site but is a higher development level than is normally found within wilderness.
Low - Has a developed recreation site or features that warrant construction of a developed recreation site.

Rating: **High** - There are no unique characteristics that would require developed public access.

6. Lands committed through contracts, permits or agreements that would be in conflict with wilderness management (some minor permitted uses may be still be allowed). (**d, h, i**)

High - Current authorizations do not conflict with potential wilderness.
Medium - Current authorization(s) but can be terminated or there is long-term authorization or commitment but does not require motorized equipment for access or maintenance.
Low - Currently exists, must be retained (long-term commitments), and requires motorized equipment for access or maintenance.

Rating: **Low** - Current permitted grazing use and the ability to use motorized equipment within the area and tools to maintain range developments is critical to the operation and effectiveness of grazing management. There are a power line right-of-way adjacent to (not within) the potential wilderness on the northwest and a road right-of-way along the southeast boundary.

7. Forest Service has sufficient control to prevent development of irresolvable, incompatible use that would lessen wilderness character and potential. (**i**)

High - No inholdings and no non-federal lands adjacent to potential wilderness.
Medium - No inholdings but adjacent lands may be private.
Low - Inholdings exist.

Rating: **Medium** - There are private lands adjacent to the potential wilderness along the south and east boundaries.

8. Cultural resource sites that may need stabilization are present. Motorized vehicle access to Traditional Cultural Properties (TCP) or scared sites is needed. (**g**)

High - No cultural resources stabilization and/or motorized vehicle access needed.
Medium - Minor stabilization and/or motorized vehicle access needed.
Low - Extensive stabilization of cultural resources needed or motorized vehicle access required.

Rating: **High** - There are no known sites in the area needing stabilization. Motorized vehicle access to any TCPs or sacred sites is not needed.

9. Mineral potential was evaluated using the *R3 Plan Revision Guidance: Minerals Information Related to the Evaluation of Potential Wilderness and Research Natural Areas*. This guidance uses several databases to consider the presence and status of mining claims, mineral leases, and mineral districts. Based on the information contained in the above databases, and as described in the Background section of this evaluation, there is low mineral potential for this potential wilderness. (**f**)

Rating: **High**

Overall Availability: **High**

Appendix D: Need Evaluation Worksheet

Additional information for Factors 1, 3, 4, and 6 can be found in the Wilderness Need Evaluation Tables document.

Factor 1 - The location, size, and type of other wildernesses in the general vicinity and their distance from the proposed area. Consider accessibility of areas to population centers and user groups. Public demand for wilderness may increase with proximity to growing population centers.

There are 18 Wilderness areas and 1 primitive area[4] within a 100-mile radius of PW-03-01-057. The total acreage of these areas is 1,374,092 acres. The Forest Service (FS) manages 11 of these areas, the Bureau of Land Management (BLM) manages 7, and the National Park Service (NPS) manages 1.

Potential Wilderness	Wilderness Area within a 100-mile radius	Wilderness Acreage	Distance from PW	Managing Agency
PW-03-01-057	Chiricahua	88,793	97	FS
	Chiricahua National Monument	12,161	78	NPS
	Dos Cabezas Mountains	11,855	68	BLM
	Rincon Mountain	38,611	101	FS
	Peloncillo Mountains	19,244	54	BLM
	Redfield Canyon	6,206	84	BLM
	Galiuro	75,585	82	FS
	Aravaipa Canyon	19,790	84	BLM
	North Santa Teresa	5,733	65	BLM
	Santa Teresa	28,769	68	FS
	Needle's Eye	6,277	89	BLM
	Fishhooks	11,400	53	BLM
	Aldo Leopold	206,700	70	FS
	Gila	558,549	39	FS
	Bear Wallow	11,113	38	FS
	Blue Range Primitive Area	179,819	29	FS
	Blue Range	35,815	29	FS
	Apache Kid	44,835	100	FS
	Mount Baldy	7,627	63	FS
	Escudilla	5,210	57	FS
	TOTAL	1,374,092		

Existing Wilderness and Primitive Areas on the Apache-Sitgreaves NFs

Wilderness Lands on the Apache-Sitgreaves NFs		
Type	**Number**	**Acres***
Wilderness	3	23,233
Primitive Area	1	180,007
TOTAL	4	203,240
* from DEIS for the ASNFs Land Management Plan.		

[4] The Blue Range Primitive Area is the last remaining such area in the United States. It is managed almost like wilderness in accordance with Forest Service Manual 2320.3(11).

The following table summarizes information found in the Wilderness Need Assessment Tables document. Only acres within the listed radius are shown; actual areas may be larger.

Wilderness and Potential Wilderness within a 100- or 130-mile* Radius of . . .				
. . .	Number of Wilderness	Wilderness Acres	Number of PW on ASNFs	PW acres on ASNFs
Apache-Sitgreaves NFs	46	2,355,715	-	-
Tucson (130 miles)	35	1,487,300	12	342,526
* A 130-mile radius was used for Tucson to reflect use of the forests from this city.				

Rating criteria:

There are significant Wilderness lands (over 2.5 million acres) on the Apache-Sitgreaves NFs and within a 100-mile radius of this potential wilderness and the forests. Because demand for wilderness is generally greater near population centers, potential wilderness within a 100- or 130-mile radius of a population center where there are less than 1 million acres of Wilderness within that radius is rated as **Medium**. Potential wilderness within a 100- or 130-mile radius of a population center where there are more than 1 million acres of Wilderness in that radius is rated as **Low**. Potential wilderness more than 100 or 130 air miles from a population center is rated as **Low**.

Rating: **Low** - There are more than 1 million acres of Wilderness within a 130-mile radius of Tucson.

Factor 2 - Present visitor pressure on other wildernesses, the trends in use, changing patterns of use, population expansion factors, and trends and changes in transportation.

Item 1

Each Federal agency that manages wilderness collects and reports visitor use information differently. The Forest Service reports wilderness use by each national forest, not each wilderness. The National Park Service collects backcountry visitor use only for overnight stays. The Bureau of Land Management reports use for each wilderness.

According to the 2001 National Visitor Use Monitoring study, approximately two percent of the Apache-Sitgreaves NFs users visited the three wilderness areas on the forests. This figure is similar to other non-urban forests in the Southwestern Region. More urban forests (Cibola and Coronado NFs) reported approximately 25 percent of their users visited wilderness areas.

Most of the wilderness use on the Apache-Sitgreaves NFs is concentrated in the two smaller wilderness areas, Mount Baldy and Escudilla. These areas are each less than 10,000 acres, are easily accessible by motor vehicles, and have limited trail systems. Visitor use in Mount Baldy is considered high with use concentrated on two of the three trails. Visitor use in Escudilla is considered moderate to high with use concentrated on one trail. Encounters with other wilderness visitors in both areas are high. Use in Bear Wallow Wilderness is lighter because it is less accessible and is slightly larger. There are no accurate use figures for the Blue Range Primitive Area, which is managed almost like wilderness.

Approximately 70 percent of the Arizona visitors to the Apache-Sitgreaves NFs are from the Phoenix and Tucson metropolitan areas. Populations in these areas have increased much faster than in the more rural areas. Visitors from the four counties where the Apache-Sitgreaves NFs are located account for another 20 percent. In general, there has been no to moderate population growth in these counties. Recently, there have been major highway improvements between Phoenix and the Apache-Sitgreaves NFs.

It can be assumed that with increasing populations and improved transportation features, wilderness use would continue to increase in those wilderness areas on the Apache-Sitgreaves NFs that are easily accessible to the recreating public.

Item 2

The Apache-Sitgreaves NFs include three designated wilderness areas, the nation's only remaining primitive area, and 322,000 acres of inventoried roadless areas. Users of designated wilderness areas fit a profile similar to other forests' users: 1) they are predominantly male (81 percent), 2) white (91 percent) or Hispanic/Latino (6 percent), 3) between the ages of 31 and 60, and 4) often travel from the Phoenix and Tucson areas. NVUM data suggest that roughly 45,000 wilderness visits were made during fiscal year 2001 although the error rate on this data is very high (± 56 percent) because of the relatively low number of visitors interviewed (Kocis et al. 2002). There are no use figures specific to the Blue Range Primitive Area or the inventoried roadless areas.

Surrounding national forests (Coconino, Coronado, Gila, and Tonto NFs) all have much higher numbers of wilderness visits than the Apache-Sitgreaves NFs. Use on the Coconino, Coronado, and Gila NFs is high, while use on the Apache-Sitgreaves NFs and Tonto NF is medium.[5]

Regional Demand for Wilderness

1. Increased demand for additional wilderness in both Arizona and New Mexico should be anticipated based on population growth during the period of 1990 to 2000, which exceeded the national growth rate.
2. Assuming Arizona continues to grow at a rate greatly outpacing the national rate (predicted to be about 3 times the national rate), the number of visits to existing wilderness will continue to increase, and Arizona in particular could benefit from additional wilderness.
3. Demographics related to visitor race and ethnicity will affect the rate of increase in wilderness visits in the Southwestern Region. Even though the faster growing racial/ethnic groups have relatively low participation rates, wilderness use is still expected to increase because of the overall population growth rate.
4. Public demand increases with proximity to six population centers: Flagstaff, Phoenix, Tucson, Santa Fe, Taos, and Albuquerque. Consider wilderness recommendations within a 100-mile radius of those cities to provide for that demand.
5. Some additional public demand for wilderness in the Southwestern Region will occur from the influx of people moving to communities in the vicinity of the national forests.
6. In terms of geographic distribution of wilderness, the Southwestern Region is underrepresented with five percent fewer wilderness acres as compared with the representation nationally. Additionally, all quadrants in Arizona and New Mexico are underrepresented with the exception of the southwest and southeast quadrants in Arizona. The most underrepresented quadrants are southeast and northwest New Mexico and northeast Arizona, which are at 6 percent or less in the number of wilderness acres (compared with total federal wilderness acres).
7. Desirability of the scenic mountainous settings available in the rural communities within and adjacent to national forests in the Southwestern Region will attract new retirees and others, further contributing to a growth in wilderness visitation.

[5] This is based on use categories developed by the Forest Service Wilderness Advisory Group, with low use defined as 0 to 10,000 visits, medium as 10,001 to 30,000 visits, and high being greater than 30,000 visits. Total wilderness use for a forest from NVUM was divided by the number of wilderness areas the forest is lead for, to get an average amount of use per wilderness.

Rating criteria:

Based on projected population increases, high use in two of the three wilderness areas on the forests, and the underrepresentation of northeast Arizona in the National Wilderness Preservation System, those potential wilderness areas within a 100- or 130-mile radius of a population center are rated as **High**. All other potential wilderness areas are rated as **Medium**.

Rating: **High**

Factor 3 - The extent to which nonwilderness lands on the NFS unit or other Federal lands are likely to provide opportunities for unconfined outdoor recreation experiences.

The following tables summarize information found in the Wilderness Need Assessment Tables document. Only acres within the listed radius are shown; actual areas may be larger. The Recreation Opportunity System (ROS) acres are for National Forest System lands only. No ROS information is available for the Gila NF. Many of the ROS acres overlap designated Wilderness, the Blue Range Primitive Area, and IRAs.

Like Wilderness Lands on the Apache-Sitgreaves NFs		
Type	**Number**	**Acres**
Inventoried Roadless Area	17	321,949
ROS-Primitive		228,954
ROS-Semi-Primitive Non-Motorized		452,486
TOTAL ACRES		1,003,389

Like Wilderness Lands within a 100-mile Radius of the Apache-Sitgreaves NFs		
Type	**Number**	**Acres**
Inventoried Roadless Area	85	1,571,867
BLM Wilderness Study Area	17	279,320
NPS proposed wilderness	1	116,769
ROS-Primitive		833,442
ROS-Semi-Primitive Non-Motorized		1,697,112
TOTAL ACRES		4,498,510

Like Wilderness Lands within a 130-mile Radius of Tucson		
Type	**Number**	**Acres**
Inventoried Roadless Area	42	860,957
BLM Wilderness Study Area	6	42,180
NPS proposed wilderness	0	0
ROS-Primitive		709,021
ROS-Semi-Primitive Non-Motorized		1,219,760
TOTAL ACRES		2,831,918

Within a 130-mile radius of Tucson **and** on the Apache-Sitgreaves NFs, there are 189,810 acres managed for Semi-Primitive Non-Motorized recreation and 92,228 acres managed for Primitive recreation.

Rating criteria:

There are significant nonwilderness lands (over 5.4 million acres) available for unconfined outdoor recreation outside of designated Wilderness and the Blue Range Primitive Area on the Apache-Sitgreaves NFs and within a 100-mile radius of the forests. Therefore, all potential wilderness areas are rated as **Low**.

Rating: **Low** - There are also significant nonwilderness lands (over 2.8 million acres) available within a 130-mile radius of Tucson.

Factor 4 - The need to provide a refuge for those species that have demonstrated an inability to survive in less than primitive surroundings or the need for a protected area for other unique scientific values or phenomena.

Forest Planning Species (FPS), as determined for Forest Plan Revision, were reviewed to determine if there were species on the Apache-Sitgreaves NFs that require primitive surroundings (natural conditions and low human disturbance) to survive. The Forest Planning Species list includes 30 mammals, 22 birds, 6 reptiles and amphibians, 13 fish, 12 invertebrates, and 25 plants. This list includes Endangered Species Act endangered, threatened, and candidate species; Southwestern Region sensitive species; and other species of interest. Only the endangered, threatened, candidate, and sensitive species are considered in this evaluation.

Through coordination with the planning wildlife and fisheries staff, it was determined that there are no endangered, threatened, candidate, or sensitive species that require primitive surroundings. However, there are 2 mammals, 7 birds, 6 reptiles and amphibians, 13 fish, 2 invertebrates, and 1 plant that would benefit from primitive surroundings.

Additional information on species that would benefit from primitive surroundings can be found in the Wilderness Need Evaluation Tables document.

Rating criteria:

High - Species or habitat for species that require primitive surroundings are present.
Medium - Species or habitat for species that would benefit from primitive surroundings are present.
Low - Neither species or habitat for species that require or would benefit from primitive surroundings are present.

There are no FPS on the forests that require primitive surroundings. Each potential wilderness has at least one FPS or has habitat for at least one FPS that would benefit from primitive surroundings. Therefore, all areas receive a **Medium** rating.

Rating: **Medium** - There are one FPS and habitat for three additional FPS that would benefit from primitive surroundings.

Factor 5 - Within social and biological limits, management may increase the capacity of established wildernesses to support human use without unacceptable depreciation of the wilderness resource.

There are three Wilderness areas on the Apache-Sitgreaves NFs, all on the Apache NF. Two, Mount Baldy and Escudilla, are less than 10,000 acres, are easily accessible by motor vehicles, and have limited trail systems. Visitor use in Mount Baldy is considered high with use concentrated on two of the three trails. Visitor use in Escudilla is considered moderate to high with use concentrated on one trail.

Encounters with other wilderness visitors in both areas are high. For these two areas there are limited management opportunities to accommodate additional use. The third wilderness, Bear Wallow, is slightly larger, is more difficult to access, and has five trails. Visitor use is considered low. Here, additional use could be accommodated without affecting the wilderness.

Rating criteria:

High - Management of all wilderness areas on the forests could not increase capacity without further affecting the wilderness resource.

Medium - Management of one or more wilderness areas on the forests could increase capacity without further affecting the wilderness resource.

Low - Management of all wilderness areas on the forests could increase capacity without affecting the wilderness resource.

Because use in Bear Wallow Wilderness is relatively low, this wilderness could accommodate some increased use without affecting wilderness resources. Therefore, all potential wilderness areas are rated as **Medium**.

Rating: **Medium**

Factor 6 - An area's ability to provide for preservation of identifiable landform types and ecosystems. Consideration of this factor may include utilization of Edwin A. Hammond's subdivision of landform types and the Bailey-Kuchler ecosystem classification. This approach is helpful from the standpoint of rounding out the National Wilderness Preservation System and may be further subdivided to suit local, subregional, and regional needs.

The Southwestern Regional Office used the process outlined in Loomis and Echohawk (1999)[6] to determine the underrepresented landforms and ecosystem types in Wilderness within Region 3.

The following underrepresented landforms (ecoregion subsection) are found on the Apache-Sitgreaves NFs: Burro Mountains oak-juniper woodland, Coconino Plateau woodland, and White Mountains scarp woodland-coniferous forest.

The following underrepresented ecosystems (PNVTs) are found on the Apache-Sitgreaves NFs: cottonwood-willow riparian forest (CWRF), dry mixed conifer forest (DMCF), interior chaparral (IC), Madrean pine-oak woodland (MPOW), mixed broadleaf deciduous riparian forest (MBDRF), montane willow riparian forest (MWRF), montane/subalpine grasslands (MSG), spruce-fir forest (SFF), wet mixed conifer forest (WMCF), and wetland/cienega riparian areas (WCRA). The wet mixed conifer forest PNVT is used as a proxy for the aspen forest/woodland ecosystem because most of the aspen on the Apache-Sitgreaves NFs is found in this PNVT.

Tables detailing the acres of underrepresented landforms and ecosystems can be found in the Wilderness Need Evaluation Tables document.

[6] Loomis, John and Echohawk, J. Chris. 1999. Using GIS to identify under-represented ecosystems in the National Wilderness Preservation System in the USA. *Environmental Conservation*. 26 (1): 53–58.

Rating criteria:

High - Underrepresented ecosystems and landforms occur across 67 percent or more of the potential wilderness.

Medium - Underrepresented ecosystems and landforms occur across 34 to 66 percent of the potential wilderness.

Low - Underrepresented ecosystems and landforms occur across 33 percent or less of the potential wilderness.

Rating: **High** - Underrepresented ecosystems occur across 82 percent of this potential wilderness and underrepresented landforms occur across 7 percent of the area. This potential wilderness contains one underrepresented landform: Burro Mountains oak-juniper woodland; and three underrepresented ecosystems: cottonwood-willow riparian forest, Madrean pine-oak woodland, and mixed broadleaf deciduous riparian forest.

Overall Need: **Medium**