

Kaibab National Forest

Potential Wilderness Capability Evaluation

Version 1.1

Background

Forests have completed a series of previous inventories for wilderness. As early as the 1920's, primitive areas were identified in the United States. The Wilderness Preservation System was established in 1964, when the Wilderness Act was passed. Two efforts to identify appropriate areas have occurred within the Forest Service, the first prior to the 1964 Wilderness Act, and the second prior to the 1984 Arizona Wilderness Act. In both of these efforts, the "gems" of the wilderness system were designated. While some areas may have been overlooked during the previous efforts, many potential wilderness areas in this latest effort have been altered by management activities, such as vegetation management, grazing improvements, utility corridors, or other activities.

Forest Plan Revision

Consideration of wilderness suitability is inherent in land management planning. Forest Service Manual and Handbook directives provide guidance about wilderness evaluation and management for Forest Plan revision.

Forest Service Handbook (FSH) direction (1909.12, Chapter 70) provides a process for identifying and evaluating potential wilderness on National Forest System Lands. This is used by the Forest Service to determine whether there are potential areas that could be recommended for wilderness designation by Congress.

The three-step Forest Service process includes 1) an inventory of potential areas, 2) evaluation of potential areas, 3) determination if a recommendation will be pursued for any potential wilderness areas. The third step will be determined by the Decision Maker for the Kaibab Forest Plan Revision. The Decision Maker may determine that a recommendation be made (the recommendation itself is a separate process from Forest Plan Revision), to include plan components that provide guidance for future work regarding recommendations within a timeframe, or to make no recommendations at this time. In the event that the last option was chosen, the information from the potential wilderness evaluations would be carried forward into a subsequent plan revision to be considered at that time.

Evaluation of Potential Wilderness Areas

The purpose of the potential wilderness area evaluation is to identify and inventory all areas within the Kaibab National Forest that satisfy the definition of wilderness found in the 1964 Wilderness Act. It states:

“A wilderness, in contrast with those areas where man and his own works dominate the landscape, is hereby recognized as an area where the earth and its community of life are untrammelled by man, where man himself is a visitor who does not remain. An area of wilderness is further defined to mean in this chapter an area of underdeveloped Federal land retaining its primeval character and influence, without permanent improvements or human habitation, which is protected and managed so as to preserve its natural conditions and which (1) generally appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable; (2) has outstanding opportunities for solitude or a primitive and unconfined type of recreation; (3) has at least five thousand acres of land or is of sufficient size as to make practicable its preservation and use in an unimpaired condition; and (4) may also contain ecological, geological, or other features of scientific, educational, scenic, or historical value.”

The areas identified are called “potential wilderness areas”. This is not a land designation; it identifies areas that meet the criteria for being evaluated for wilderness suitability, and possible recommendation to Congress for wilderness study or designation. An area recommended as suitable for wilderness must meet the tests of capacity, availability, and need.

Inventory of Potential Wilderness Areas

The Southwestern Region developed a Potential Wilderness Inventory (2007) process for use by national forests in the region. After the initial inventory is completed, there are three subsequent segments used to evaluate potential wilderness areas:

- 1) Capacity – evaluation of the inherent characteristics of the potential area.
- 2) Availability – evaluation of the value and need for wilderness compared to value and need for other resources or uses.
- 3) Need – evaluation of the regional distribution of wilderness and representation of regional landforms and ecosystems.

The inventory relies on local knowledge and judgment regarding unique, site specific conditions of each area being considered. When delineating the boundaries of areas, efforts are made to facilitate easy on-the-ground identification.

As the Kaibab National Forest completes the subsequent three segments, the information will be added to this report. At this time, the initial inventory and capacity evaluation have been completed and are documented below.

Inventory Criteria

In order to place an area on the potential wilderness inventory, it must meet the definition quoted above, 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 can 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 qualify for inventory of potential wilderness even though they include the types of areas or features listed in FSH 1909.12, Chapter 71.11.

Kaibab National Forest Process

1. The Kaibab National Forest (KNF) planning core team completed the initial stages of the inventory. The team first completed a forest-wide, large scale geographic information system query of polygons or areas as defined by existing roads and railroads. This first step identified over 350 polygons that “initially met” the criteria. The planning team reviewed each polygon that had been identified. A number of errors relating to the forest roads layer were found; as well as an error where Camp Navajo (Arizona National Guard facility) was included in the evaluation. Roads errors included roads that showed gaps or several individual segments when a continuous permanent road was known to exist, or roads that had been decommissioned and needed to be removed, or “floating” roads that were corrected. Camp Navajo is not under the jurisdiction of the KNF and is removed from further evaluation. The clean up of the roads layer information resulted in a reduced number of polygons that actually met the inventory criteria but also ‘improved’ a number of the remaining polygons by increasing their area. At the conclusion of the review, about 150 polygons remained.

The planning team made a distinction at this point between “large polygons”: those approximately 5,000 acres or more (and included a few areas that were less than 5,000 acres but could be considered a self-contained ecosystem), and the numerous “small polygons” adjacent to existing designated wilderness. For this purpose the small polygons were defined as areas of 40 acres or more adjacent to existing wildernesses. While there were polygons smaller than 40 acres, the process of evaluating these and in simply locating that small an area in most cases was deemed impractical. One exception was made where any polygons on the west side of Kanab Creek were retained so that a contiguous boundary could be established that would be locatable on the ground. The remaining large and small polygons were carried through the next two steps. The polygons less than 40 acres were removed.

2. The Forest Service Handbook 1909.12 Chapter 70, Section 71.11 “Criteria for Including Improvements” was used to identify areas that should be precluded from the potential wilderness inventory. This includes intensive timber harvest areas where logging and road construction are evident, mineral leases with surface occupancy, developed recreation sites, and large scale improvements such as high voltage power lines and pipelines with cleared rights of way.
3. Finally, criteria for dealing with roaded areas, fingers and other extrusions were applied. In each polygon with roads, a ¼ mile buffer was applied. This last initial filter resulted in 70 large and small polygons. When these criteria were each evaluated, 7 large polygons remained that met the inventory criteria. The small polygons were evaluated and some were identified to carry forward. Of the large polygons, the remaining 7 polygons were carried forward into the capability segment of the evaluation. These are presented in Table 1.

The small polygons adjacent to existing wilderness were evaluated further by reviewing: a) if there were distinct boundaries that would make these small polygons easy to identify and locate; and b) if they met the definition of wilderness. Many of the polygons would be very difficult to identify making their management more difficult. A few are distinctive and clearly defined and have been carried forward. See Table 2 for these small polygons.

Table 1. Wilderness evaluation criteria form for large polygons.

Area	Step 1 5,000 acres or if less meets a, b, or c	a. Can be preserved due to physical terrain and natural conditions	b. Is a self contained ecosystem, such as an island, that can be effectively managed as wilderness	c. Is contiguous to existing wilderness regardless of size	d. Does not contain forest roads or other author- ized roads	Step 2 area removed due to FSH 71.11	Step 3 area removed due to R3 criteria for roaded areas, fingers, extrusions	Step 4 meets definition of wilderness which:	Include and carry through capability evaluation or Exclude
KNF 126					Yes			Yes	Include
KNF 151					Yes			Yes	Include
KNF 156					Yes			Yes	Include
KNF 225					Yes			Yes	Include
KNF 296					Yes			Yes	Include
KNF 353					Yes			Yes	Include
KNF 358					Yes			Yes	Include
KNF 134	Yes				No: Road along fenceline.	Yes: Management activities visible including juniper pushes, mechanical shearing.		No	Exclude

Table 2. Potential Wilderness small polygons.

Area	Step 1 5,000 acres or if less meetings a, b, or c	a. Can be preserved due to physical terrain and natural conditions	b. Is a self-contained ecosystem, such as an island that can be effectively managed as wilderness	d. Is contiguous to existing wilderness regardless of size	Meets the definition of wilderness
343	N-182 ac.	Y	N	Y	Y
347	N-287 ac.	Y	N	Y	Y
341	N-479 ac.	Y	N	Y	Y
313	N-1127 ac.	Y	N	Y	Y
343	N-182 ac.	Y	N	Y	Y
16	N-1562	Y	N	Y	Y
32	N-3828	Y	N	Y	Y
213	N-251	Y	N	Y	Y
239	N-449	Y	N	Y	N, road south side

Evaluation of Potential Wilderness Areas

After completion of the wilderness inventory, if an area is to be recommended as suitable for wilderness, it must be further evaluated for capability, availability and need.

Capability is the degree to which an area contains the basic characteristics that make it suitable for wilderness recommendation. Availability compares the value of and need for the wilderness resource to the value and need for other resources. Need is determined through analysis on a regional basis by evaluating factors such as geographic distribution of areas and representations of landforms and ecosystems to which it contributes to the overall Wilderness Preservation System.

Capability Analysis

For Wilderness capability basic characteristics are used to evaluate the initial suitability for wilderness recommendation without regard to its availability or need as wilderness. Five principle wilderness characteristics (based on the Wilderness Act) are analyzed in this step (FSH 1909.2, Chapter 70, Section 72.1):

1. Natural – the area is substantially free from the effects of modern civilization and generally appears to be affected primarily by forces of nature.
2. Undeveloped – the degree to which an areas is without permanent improvements or human habitation.
3. Outstanding Opportunities for Solitude or Primitive and Unconfined Recreation.
4. Special Features and Values – an area is capable of providing other values such as those with ecologic, geologic, scientific, educational, scenic, historic or cultural significance.
5. Manageability – ability to manage the area as wilderness as required by the Wilderness Act and how boundaries of the area affect its manageability.

The planning core team and an interdisciplinary group from each district performed the capability analysis. This group provided both on-the-ground knowledge and multiple resource specialist perspectives.

Potential wilderness areas with overall capability rankings of “high” will be carried forward to the next segment where availability is evaluated.

Williams Ranger District

Two large polygons were identified during the inventory and carried forward for capacity analysis. Only one area met the inventory criteria, Sitgreaves Mountain (KNF-157). Tables 3 displays detailed information about the capability criteria and rankings for Sitgreaves Mountain. Since the overall rating was medium, this area will not be carried forward to availability. Two other small polygons adjacent to existing designated wilderness are carried forward. These are in the vicinity of Government Canyon and Jacks Canyon (KNF – 16 and KNF-32) adjacent to Sycamore Canyon Wilderness that has overlapping forest boundaries with the Prescott National Forest. These areas need further review with both forests. These small polygons would add value to the existing

wildernesses and have distinguishable boundaries that would facilitate their management. Figure 1 displays the inventory of potential wilderness areas on Williams Ranger District.

Table 3. Sitgreaves Mountain (KNF - 157) Capability Evaluation

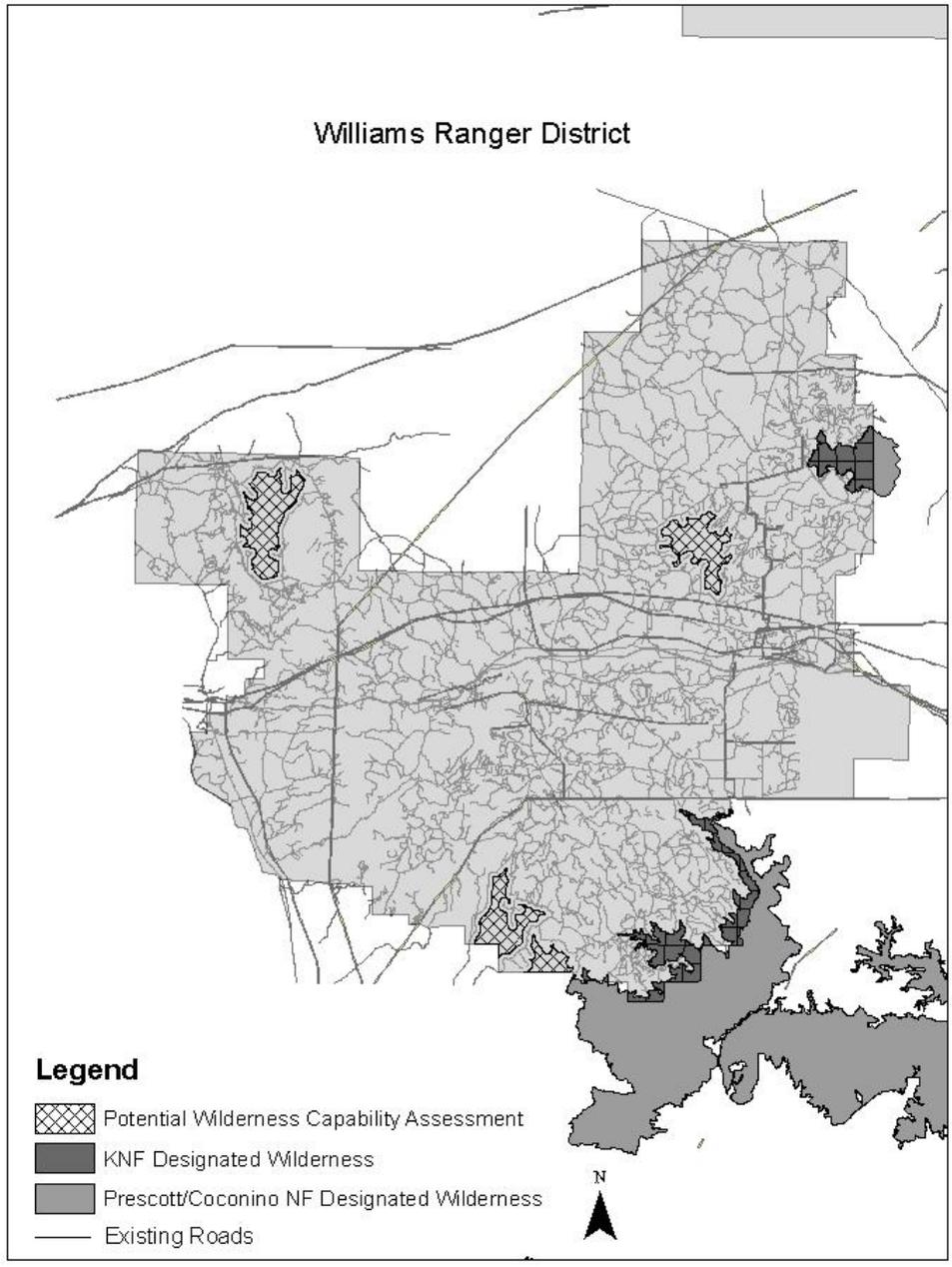
Potential Wilderness: Sitgreaves Mountain	Identification Number: KNF – 157	Forest/District: Kaibab NF/Williams			
<p>Capability Ranking – Medium</p>	<p>Description – This area is less than 5,000 acres. This mountain is an isolated peak, referred to as a Sky Island. It would fit the second inventory criteria of a self-contained ecosystem. The area is located within the Kaibab Forest Plan Geographic Area 2 Williams Forest Land. The peak has thick stands of mixed conifer at higher elevations, and ponderosa pine on lower elevation slopes. There are some clumps of quaking aspen interspersed with the conifers. The area has some ATV intrusions. There are active grazing allotments at the base. There are active vegetation management activities on the north and west sides and evidence of large tree harvesting in some drainages. Historic railroad logging occurred at the base of the mountain and up some draws. There is a helispot cleared of vegetation that is active toward the top of the peak.</p>				
<p>Overall Natural Rank – Medium</p>					
<p>Subsets of Natural Rankings 1-5</p>	<p>1. Presence of Non-Native Species: Medium Notes: Non-native species are evident in isolated spots. Toadflax and bull thistle.</p>	<p>2. Seeps or springs within the area are in free-flowing condition: Low Notes: May have been present historically around the area.</p>	<p>3. Quality of night-sky as affected by light: High Notes: The night sky is clear with little to no interference from light pollution.</p>	<p>4. Area provides elements of biological diversity and naturalness, including unique habitats: High Notes: Area has critical or unique habitats and diverse ecological conditions. Mexican spotted owls, goshawks, peregrine falcon.</p>	<p>5. Area contains a variety of natural resources, including a variety of tree species and structures, intermingled grasslands or meadows, diversity of wildlife habitats and wildlife: High Notes: diverse amount of natural resources. Mixed conifer cinder cone in a ponderosa pine forest. Threatened by fire exclusion and high fire risk.</p>
<p>Overall Undeveloped Rank – Medium</p>					
<p>Subset of Undeveloped Ranking</p>	<p>1. Area is free from human disturbance: Medium Notes: Only the top of the mountain provides the untrammled condition. There are many historic and</p>				

	<p>current timber sales on lower slopes on north and west sides. There are historic and current sales immediately adjacent on the east side. Evidence of historic logging and subsequent sales that cut most yellow pine in draws. Fuel wood theft of juniper at base. ATV intrusions especially on Eagle Rock. Lower slopes receive livestock grazing. Lower slopes have a "low" ranking. Some roads on the north side have been closed to motorized use, but a number of roads remain on the west side.</p>				
Overall Opportunity Rank – Medium	<p>It is notable that the top of the mountain has no development (no lookout tower, communications towers). There is no developed trail system.</p>				
Subset of Opportunity Rankings 1-4	<p>1. Area provides physically and mentally challenging recreation opportunities that promote adventure and self-reliance: Medium Notes: Some parts of the area have the potential for challenging recreation opportunities. Given the size of the area, terrain and vegetation, there are challenging recreation opportunities due to the</p>	<p>2. Opportunity to experience solitude and isolation from human activities while recreating in this area: Medium Notes: Feeling of being alone is possible but signs of civilization are likely. On the upper slopes to top of the mountain there are</p>	<p>3. Opportunity to engage in primitive and unconfined recreation such as backpacking, kayaking, hunting fishing, etc: Medium Notes: There are some opportunities for engaging in primitive recreation. Higher slopes provide opportunities particularly for hiking</p>	<p>4. Degree of primitive ROS settings: Medium Notes: Some of the area is classified as semi-primitive non-motorized. There are many short open road segments in the lower area.</p>	

	steepness of the mountain and thick vegetation on the upper slopes.	opportunities for solitude and isolation. Interstate 40 is audible on south faces, and motorized intrusions from ATV's occur.	and hunting.		
Overall Special Features Rank – Medium					
Subset of Special Features Rankings 1-3	1. Area contains outstanding or distinct features like rock formations, panoramic views, etc: Medium Notes: There are some distinct features such as Eagle Rock and on some ridges. Trees obscure views on top.	2. Area has potential for scientific research, environmental education, or historic/cultural opportunities: High Notes: Good potential for 2 or more types. Significant cultural resources. This is a rare feature of a cinder cone rising out of a flat forested landscape.	3. Area contains unique or rare species of plants and/or animals: Medium Notes: Area has few unique or rare plants and/or animals. Mexican spotted owl, goshawks, peregrine falcon, Rocky Mountain maple in drainages.		
Overall Manageability Rank – Low					
Subset of Manageability Rankings 1-2	1. Ability to manage the area for wilderness character including distance and influence from outside activities; opportunities to access the area; and resource conflicts or encumbrances: Low Notes: Areas of activity are nearby; there are many access opportunities; many resource conflicts and/or	2. Area boundaries are recognizable: Low Notes: Several boundaries were discussed including use of existing open roads around the base or following a contour line or slope break. Use of existing roads would be easily identifiable, but would			

	<p>encumbrances. The area is highly departed from historic conditions and at high risk of uncharacteristic fire. The Mexican spotted owl and smoke restrictions make management with fire only difficult. Conflicts with on-going and planned fuels and vegetation treatments exist. ATV intrusions are ongoing.</p>	<p>include active vegetation management activities. The contours or slope breaks would be difficult to identify.</p>			
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Figure 1. Williams District inventory of potential Wilderness evaluated for capacity.



Tusayan Ranger District

Four large polygons were identified during the inventory. These were considered in the capability ranking for Tusayan Ranger District as illustrated in Figure 2. Only two areas met the capability criteria: Red Butte (KNF – 151) with an overall rank of medium, and Coconino Rim (KNF – 156) with an overall rank of high. Only Coconino Rim will be carried forward to the availability segment. Tables 3 and 4 provide detailed information about the capability evaluation. Red Butte would remain in the semi-primitive non-motorized ROS category and managed for non-motorized recreation opportunities.

Since there is no existing designated wilderness on Tusayan Ranger District, there were no small polygons to evaluate.

Table 3. Red Butte (KNF – 151) Capability Evaluation

Potential Wilderness: Red Butte		Identification Number: KNF-151			Forest/District: Kaibab NF/Tusayan	
<p>Capability Ranking –</p> <p>Medium</p>	<p>Description – This area is 1237 acres. It meets the second inventory criteria of a self-contained ecosystem. The area is located in Kaibab Forest Plan Geographic Area 8, Southern Tusayan Woodland. Red Butte is a unique geological formation where the top is a basaltic cap over Shinarump conglomerate, followed by Kaibab limestone and Moenkopi formations. The top of the butte has 360 degree views of the surrounding area including the San Francisco Peaks. Vegetation is pinyon-juniper/sage and grassland. There is an isolated clump of low elevation aspen.</p> <p>There is potential to expand this area to the west by closing some low use existing roads. This would reduce access on the west side. The existing trailhead and existing trail would need to be relocated adjacent to the open road system. These actions would make the area exceed 5,000 acres but are not necessary for wilderness management.</p>					
Overall Natural Rank – Medium						
Subsets of Natural Rankings 1-5	<p>1. Presence of Non-Native Species: Medium Notes - Russian thistle is common on the flats and bull thistle is nearby. The butte may be "high" for non-native species.</p>	<p>2. Seeps or springs within the area are in free-flowing condition: Low Notes: Seeps/springs absent.</p>	<p>3. Quality of night-sky as affected by light: High Notes – Night ski is clear with little or not interference from light pollution</p>	<p>4. Area provides elements of biological diversity and naturalness, including unique habitats: Medium Notes: Area has a mix of habitats and ecological conditions. May contain <i>Chrysothamnus molestus</i>. May contain Tusayan flame flower. Small aspen clone. Only vertical features for miles.</p>	<p>5. Area contains a variety of natural resources, including a variety of tree species and structures, intermingled grasslands or meadows, diversity of wildlife habitats and wildlife: Low Notes: Limited amount of natural resource diversity. Pinyon-juniper/sage is the prevalent cover.</p>	
Overall Undeveloped Rank - Medium						
Subset of Undeveloped Ranking	<p>1. Area is free from human disturbance: Medium Notes: Has several minor improvements and is mostly free of human disturbance. FS microwave tower and lookout tower on east edge of butte. Existing trailhead and developed trail on west</p>					

	side. An open roads to lookout tower is located on north side but is not included in the wilderness polygon. There is a developed stock tank on south side. There are ATV intrusions.				
Overall Opportunity Rank – Medium					
Subset of Opportunity Rankings 1-4	<p>1. Area provides physically and mentally challenging recreation opportunities that promote adventure and self-reliance: Low Notes: Few parts of the area can provide challenging recreation opportunities.</p>	<p>2. Opportunity to experience solitude and isolation from human activities while recreating in this area: Medium Notes: Feeling of solitude is possible but signs of civilization are likely. The butte is very remote but views and noise from Hwy 64/180 are visible/audible from the top.</p>	<p>3. Opportunity to engage in primitive and unconfined recreation such as backpacking, kayaking, hunting fishing, etc: Medium Notes: There are some opportunities for engaging in primitive recreation.</p>	<p>4. Degree of primitive ROS settings: High Notes: Area is classified as semi-primitive non-motorized.</p>	
Overall Special Features Rank – Medium					
Subset of Special Features Rankings 1-3	<p>1. Area contains outstanding or distinct features like rock formations, panoramic views, etc: Medium Notes: Some distinct features. Unique geologic formation and panoramic view from top.</p>	<p>2. Area has potential for scientific research, environmental education, or historic/cultural opportunities: High Notes: Good potential for 2 or more. Significant feature to many local tribes. Likely to be nominated as a "Traditional Cultural</p>	<p>3. Area contains unique or rare species of plants and/or animals: Medium Notes: Area has few unique or rare plants and/or animals. Low elevation aspen clone. Golden eagle nest.</p>		

		Property". Unique geological formation.			
Overall Manageability Rank – High					
Subset of Manageability Rankings 1-2	<p>1. Ability to manage the area for wilderness character including distance and influence from outside activities; opportunities to access the area; and resource conflicts or encumbrances:</p> <p>Medium</p> <p>Notes: Somewhat isolated from areas of activity; adequate access; some resource conflicts or encumbrances. About 2 miles from Hwy 64/180. Road to top of butte. Uranium claims, especially on flat area to west. Microwave tower and lookout tower dominate view to east.</p>	<p>2. Area boundaries are recognizable: High</p> <p>Notes: Boundary follows features that can easily be found and are identifiable on the ground. Could delineate either the butte from base to top or use roads that surround the butte.</p>			

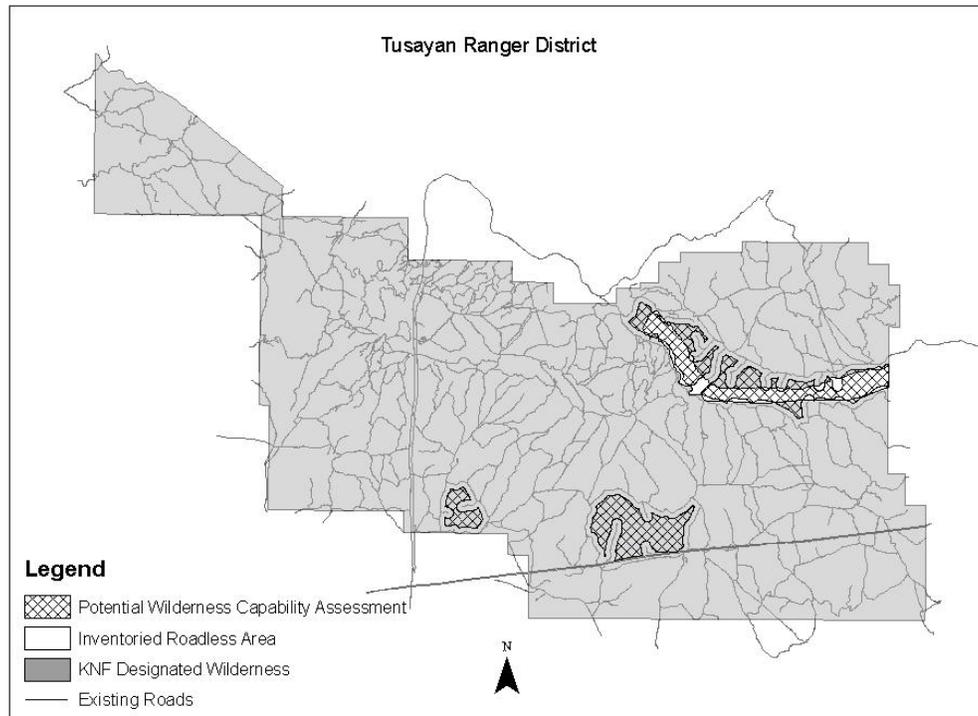
Table 4. Coconino Rim (KNF – 156) Capability Evaluation.

Potential Wilderness: Coconino Rim		Identification Number: KNF – 156/159		Forest/District: Kaibab NF/Tusayan	
Capability Ranking – High	Description – This area includes 9266 acres. It is located in Kaibab Forest Plan Geographic Areas 9 and 10, Upper Basin and Tusayan Forest Land. This is a geologic uplift of Kaibab limestone. Steep slopes rise up from the east and flatten off as the rim is reached. Vegetation ranges from sagebrush/grassland at the base to pinyon-juniper on mid-slopes and ponderosa pine on top. There is little or no evidence of railroad logging or timber sales, and there are few grazing improvements.				
Overall Natural Rank – High					
Subsets of Natural Rankings 1-5	<p>1. Presence of Non-Native Species: High Notes: Non-native species are not evident.</p>	<p>2. Seeps or springs within the area are in free-flowing condition: Low Notes: Seeps and springs absent.</p>	<p>3. Quality of night-sky as affected by light: High Notes: The night sky is clear with little to no interference from light pollution.</p>	<p>4. Area provides elements of biological diversity and naturalness, including unique habitats: Medium Notes: Area has a mix of habitats and ecological conditions.</p>	<p>5. Area contains a variety of natural resources, including a variety of tree species and structures, intermingled grasslands or meadows, diversity of wildlife habitats and wildlife: High Notes: Diverse amount of natural resources. Range from sagebrush grassland to ponderosa pine. Two aspen clumps. Douglas-fir in transition. Rocky Mountain maple in drainages.</p>
Overall Undeveloped Rank – High					
Subset of Undeveloped Ranking	<p>1. Area is free from human disturbance: High Notes: Has only minor improvements and appears free of human disturbance. Several short road segments will</p>				

	be closed to motorized travel when the Tusayan Travel Management decision is implemented.				
Overall Opportunity Rank – High					
Subset of Opportunity Rankings 1-4	<p>1. Area provides physically and mentally challenging recreation opportunities that promote adventure and self-reliance: Medium Notes: Some parts of the area have the potential for challenging recreation opportunities. This area has high slopes and relief.</p>	<p>2. Opportunity to experience solitude and isolation from human activities while recreating in this area: High Notes: Significant feeling of being alone or remote from civilization.</p>	<p>3. Opportunity to engage in primitive and unconfined recreation such as backpacking, kayaking, hunting fishing, etc: Medium Notes: There are some opportunities for engaging in primitive recreation. This is probably the most primitive area on the Tusayan Ranger District.</p>	<p>4. Degree of primitive ROS settings: High Notes: The area is classified as semi-primitive non-motorized. Inventoried Roadless Area.</p>	
Overall Special Features Rank – Medium					
Subset of Special Features Rankings 1-3	<p>1. Area contains outstanding or distinct features like rock formations, panoramic views, etc: Medium Notes: Some distinct features. Outstanding views into the Little Colorado River gorge, Painted Desert, and parts of Grand Canyon from the top and upper slopes.</p>	<p>2. Area has potential for scientific research, environmental education, or historic/cultural opportunities: Medium Notes: Potential for one type of opportunity. Significant cultural features, including a high priority asset.</p>	<p>3. Area contains unique or rare species of plants and/or animals: Medium Notes: Area has a few unique or rare plants and/or animals. Low-elevation aspen and Douglas-fir.</p>		
Overall Manageability Rank – High					

<p>Subset of Manageability Rankings 1-2</p>	<p>1. Ability to manage the area for wilderness character including distance and influence from outside activities; opportunities to access the area; and resource conflicts or encumbrances: High Notes: Isolated from areas of activity; controlled or limited access; no encumbrances or resource conflicts. Road closures will need enforcement. May include staked uranium claims. No active or valid claims known.</p>	<p>2. Area boundaries are recognizable: High Notes: Majority of the boundary follows features that can be easily found and are identifiable on the ground.</p>			
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Figure 2. Tusayan District inventory of potential Wilderness evaluated for capacity.



North Kaibab Ranger District

The North Kaibab Ranger District had the largest number of polygons identified. The district has four inventoried roadless areas that were included in the inventory process. Four large polygons carried through the inventory process and capability evaluations. South Canyon Point (KNF – 225) received a medium ranking, Seegmiller (KNF – 296) received a medium ranking, Willis Canyon (KNF – 358) received a medium ranking, and Burro Canyon (KNF – 353) received a high ranking. Burro Canyon will be carried forward into the availability segment of the evaluation.

Tables 4 through 7 display detailed information for the capability evaluations of these polygons. Small polygons adjacent to existing wilderness that are carried forward include the narrow strip of non-wilderness on the west side of Kanab Creek Wilderness and Sowats Point (KNF - 239). The strip of land on the east boundary of Kanab Creek Wilderness could be added to Kanab Creek Wilderness. Sowats Point has a road and turn around constructed through it. It does not meet the wilderness characteristics. The Cockscombs (KNF – 213), Sourdough Well (KNF – 193), and polygons KNF-190 and KNF - 184 could be added to Saddle Mountain Wilderness. All of these would add value to the existing wilderness and have distinguishable boundaries. Figure 4 displays the potential wilderness areas on the North Kaibab Ranger District.

Table 4. South Canyon (KNF – 225) Capability Evaluation.

Potential Wilderness: South Canyon Point		Identification Number: KNF – 225			Forest/District: Kaibab NF/North Kaibab	
Capability Ranking – Medium	Description – This area includes 5,400 acres when the pipeline to the nearby ranch house and paralleling road are excluded. The area is bounded by South Canyon and Marble Canyons on the north side. South Canyon Trailhead and access road are also excluded. The area is located within the Kaibab Forest Plan Land Use Zone 16, Eastern North Kaibab Woodland. Vegetation is sagebrush/pinyon-juniper transition.					
Overall Natural Ranking – Low						
Subsets of Natural Rankings 1-5	1. Presence of Non-Native Species: Medium Notes: Non-native species are evident in isolated spots. Cheatgrass and mustards. Bison from AZ Game and Fish Department Buffalo Ranch.	2. Seeps or springs within the area are in free-flowing condition: Low Notes: Seeps and springs absent.	3. Quality of night-sky as affected by light: High Notes: The night sky is clear with little to no interference from light pollution.	4. Area provides elements of biological diversity and naturalness, including unique habitats: Low Notes: Area has limited ecological conditions and habitats. Presence of Pediocactus on edge of cliffs. Sagebrush and pinyon-juniper woodland.	5. Area contains a variety of natural resources, including a variety of tree species and structures, intermingled grasslands or meadows, diversity of wildlife habitats and wildlife: Low Notes: Limited amount of natural resource diversity.	
Overall Undeveloped Rank – High						
Overall Opportunity Rank – Low	1. Area is free from human disturbance: High Notes: Has only minor improvements and appears free of human disturbance. When the existing improvements are excluded, the remaining area appears free of human disturbance.					
Subset of Opportunity Rankings 1-4						
	1. Area provides physically and mentally challenging recreation opportunities that promote adventure and self-reliance: Low Notes: Few parts of the area can provide challenging	2. Opportunity to experience solitude and isolation from human activities while recreating in this area: High Notes: Significant feeling	3. Opportunity to engage in primitive and unconfined recreation such as backpacking, kayaking, hunting fishing, etc: Low Notes: There are few to no	4. Degree of primitive ROS settings: Low Notes: Little to none of the area is classified as primitive or semi-primitive non-motorized.		

	recreation opportunities. It is fairly flat and open.	of being alone or remove from civilization. Aside from the nearby ranch house the area is remote.	opportunities to engage in primitive recreation. The size of this area limits opportunities for primitive and unconfined recreation. There are opportunities to walk or view scenery.		
Overall Special Features Rank – Medium					
Subset of Special Features Rankings 1-3	<p>1. Area contains outstanding or distinct features like rock formations, panoramic views, etc: High Notes: Many distinct features or few but exceptional features. Viewpoint and panoramic views.</p>	<p>2. Area has potential for scientific research, environmental education, or historic/cultural opportunities: High Notes: Good potential for 2 or more types of opportunities. Scientific research and cultural resources.</p>	<p>3. Area contains unique or rare species of plants and/or animals: Medium Notes: Area has few unique or rare plants and/or animals. Pediocactus. There may be locations where California condors perch.</p>		
Overall Manageability Rank – Medium					
Subset of Manageability Rankings 1-2	<p>1. Ability to manage the area for wilderness character including distance and influence from outside activities; opportunities to access the area; and resource conflicts or encumbrances: Medium Notes: Somewhat isolated from areas of activity; adequate access opportunities; some resource conflicts and/or encumbrances. ATV and motorized vehicle intrusions.</p>	<p>2. Area boundaries are recognizable: High Notes: Majority of the boundary follows features that can be easily found and are identifiable on the ground. Can use roads and canyon edge as boundaries.</p>			

Table 5. Seegmiller (KNF – 296) Capability Evaluation.

Potential Wilderness: Seegmiller		Identification Number: KNF – 296			Forest/District: Kaibab NF/North Kaibab	
Capability Ranking – Medium	Description – The area includes 5,400 acres. It is located in Kaibab Forest Plan Geographic Area 16, Eastern North Kaibab Woodland. Vegetation in the area is composed of pinyon-juniper woodland on the west, rolling sagebrush bottoms, shale escarpments, cold desert shrublands, and rocky canyons. There are some livestock improvements and the area is in an active grazing allotment. Uranium claims are staked as this area is outside the Grand Canyon Game Preserve.					
Overall Natural Rank – Medium						
Subsets of Natural Rankings 1-5	1. Presence of Non-Native Species: Medium Notes: cheatgrass, spotted knapweed, Russian thistle all present.	2. Seeps or springs within the area are in free-flowing condition: Medium Notes: Rock Canyon has 3 seeps. One was developed and there is a developed pipeline. There may be other seeps.	3. Quality of night-sky as affected by light: High Notes: The night sky is clear with little to no interference from light pollution.	4. Area provides elements of biological diversity and naturalness, including unique habitats: Medium Notes: The area has a mix of habitats and ecological conditions. Pediocactus conservation agreement.	5. Area contains a variety of natural resources, including a variety of tree species and structures, intermingled grasslands or meadows, diversity of wildlife habitats and wildlife: Medium Notes: Mixed amount of natural resources. Sage grading into rocky canyons. South Canyon above the cliff offers some variety.	
Overall Undeveloped Rank – Medium						
Subset of Undeveloped Ranking	1. Area is free from human disturbance: Medium Notes: Developed stock tanks on eastern edge and improved spring. Staked uranium claims.					
Overall Opportunity Rank – Medium						
Subset of Opportunity Rankings 1-4	1. Area provides physically and mentally challenging recreation opportunities that promote adventure and self-reliance: Medium Notes: Some parts of the area have potential for challenging recreation opportunities. Steep slopes, but narrowness of the	2. Opportunity to experience solitude and isolation from human activities while recreating in this area: High Notes: Significant feeling of being alone or remote from civilization. There	3. Opportunity to engage in primitive and unconfined recreation such as backpacking, kayaking, hunting fishing, etc: Medium Notes: Opportunities for backpacking and hunting.	4. Degree of primitive ROS settings: Medium Notes: Some of the area is classified primitive or semi-primitive non-motorized.		

	area limits opportunities.	are places where cars are visible on Hwy 89A.			
Overall Special Features Rank – Medium					
Subset of Special Features Rankings 1-3	<p>1. Area contains outstanding or distinct features like rock formations, panoramic views, etc: Medium Notes: Some distinct features. There are vistas and canyon formations.</p>	<p>2. Area has potential for scientific research, environmental education, or historic/cultural opportunities: High Notes: Good potential for 2 or more types. Pediocactus and cultural resources.</p>	<p>3. Area contains unique or rare species of plants and/or animals: Medium Notes: Area has a few unique or rare plants and/or animals. Pediocactus.</p>		
Overall Manageability Rank – Medium					
Subset of Manageability Rankings 1-2	<p>1. Ability to manage the area for wilderness character including distance and influence from outside activities; opportunities to access the area; and resource conflicts or encumbrances: Medium Notes: Somewhat isolated from areas of activity; adequate access opportunities; some resource conflicts and/or encumbrances.</p>	<p>2. Area boundaries are recognizable: Medium Notes: About half of the boundary follows features that can be easily found and are identifiable on the ground. The rest of the area would be difficult to distinguish.</p>			

Table 6. Willis Canyon (KNF – 358) Capability Evaluation.

Potential Wilderness: Willis Canyon		Identification Number: KNF – 358			Forest/District: Kaibab NF/North Kaibab	
Capability Ranking – Medium	Description – The area includes 7,440 acres. It is located in Kaibab Forest Plan Geographic Area 12, Western North Kaibab Woodland. Vegetation in the area consists of pinyon-juniper woodland with ponderosa pine stringers. Sagebrush is found in the valley bottoms. The Willis Canyon Burn affected part of the area. It is within an active grazing allotment and a stock tank will be constructed this year. There are gas and oil leases, and an existing drill site.					
Overall Natural Ranking – Medium						
Subsets of Natural Rankings 1-5	1. Presence of Non-Native Species: Medium Notes: Non-native species are evident in isolated spots. Cheatgrass.	2. Seeps or springs within the area are in free-flowing condition: Low Notes: Seeps and springs absent.	3. Quality of night-sky as affected by light: High Notes: The night sky is clear with little to no interference from light pollution.	4. Area provides elements of biological diversity and naturalness, including unique habitats: Low Notes: Area has limited ecological conditions and habitats.	5. Area contains a variety of natural resources, including a variety of tree species and structures, intermingled grasslands or meadows, diversity of wildlife habitats and wildlife: Medium Notes: Mixed amount of natural resource diversity. Sagebrush swales and pinyon-junipers with some ponderosa pine stringers.	
Overall Undeveloped Rank – Medium						
Subset of Undeveloped Ranking	1. Area is free from human disturbance: Medium Notes: Has several minor improvements and is mostly free of human disturbance. There is an existing fence line, a one-half acre oil well pad, and a stock tank. Noise from adjacent Hwy 89A is audible.					
Overall Opportunity Rank – Medium						
Subset of Opportunity Rankings 1-4	1. Area provides physically and mentally challenging recreation opportunities that promote adventure and self-reliance: Medium	2. Opportunity to experience solitude and isolation from human activities while recreating in this area:	3. Opportunity to engage in primitive and unconfined recreation such as backpacking, kayaking, hunting fishing, etc:	4. Degree of primitive ROS settings: Medium Notes: Some of the area is classified as primitive or semi-		

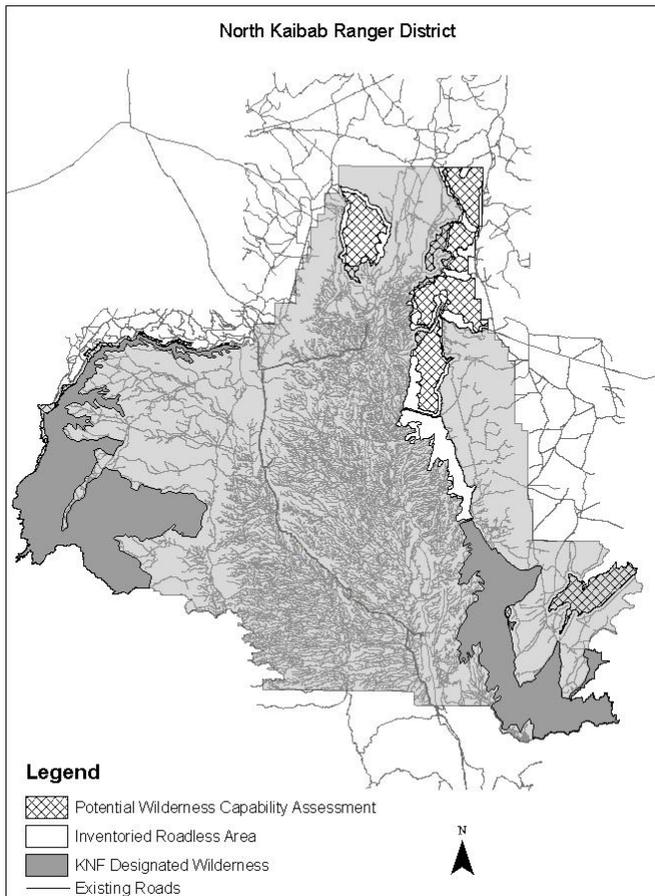
	Notes: Some parts of the area have the potential for challenging recreation opportunities. The area is rugged and scenic.	Medium Notes: Feeling of being alone is possible but signs of civilization are likely. Highway noise removes sense of remoteness.	Medium Notes: There are some opportunities for engaging in primitive recreation. Backpacking, hunting, hiking, horseback riding.	primitive non-motorized.	
Overall Special Features Rank – Low					
Subset of Special Features Rankings 1-3	1. Area contains outstanding or distinct features like rock formations, panoramic views, etc: Low Notes: One or no distinct features. Nothing particularly notable.	2. Area has potential for scientific research, environmental education, or historic/cultural opportunities: Medium Notes: Potential for one type of opportunity. Cultural resources.	3. Area contains unique or rare species of plants and/or animals: Low Notes: Area has no unique or rare plants and/or animals.		
Overall Manageability Rank – Medium					
Subset of Manageability Rankings 1-2	1. Ability to manage the area for wilderness character including distance and influence from outside activities; opportunities to access the area; and resource conflicts or encumbrances: Medium Notes: Somewhat isolated from areas of activity; adequate access opportunities; some resource conflicts and/or encumbrances.	2. Area boundaries are recognizable: High Notes: Majority of the boundary follows features that can be easily found and are identifiable on the ground.			

Table 7. Burro Canyon (KNF – 353) Capability Evaluation.

Potential Wilderness: Burro Canyon		Identification Number: KNF – 353		Forest/District: Kaibab NF/North Kaibab	
Capability Ranking – High	Description – This area includes 9142 acres. It is located in Kaibab Forest Plan Geographic Area 16, Eastern North Kaibab Woodland. Vegetation in the area includes pinyon-juniper on the steep bench, and sagebrush/grassland flats below. It is part of a sandstone uplift and there are a number of rocky canyons; some with rock formations. It is part of an active grazing allotment. There are gas and oil leases. A sliver of the area is outside the Grand Canyon Game Preserve and is open to mineral entry. There is an existing developed trail.				
Overall Natural Ranking – Medium					
Subsets of Natural Rankings 1-5	1. Presence of Non-Native Species: High Notes: Non-native species are not evident. There may be some cheatgrass.	2. Seeps or springs within the area are in free-flowing condition: Low Notes: Seeps and springs absent.	3. Quality of night-sky as affected by light: High Notes: The night sky is clear with little to no interference from light pollution.	4. Area provides elements of biological diversity and naturalness, including unique habitats: Medium Notes: Area has a mix of habitats and diverse ecological conditions. Pediocactus. Condors nesting on adjacent Vermilion Cliffs and condor release area.	5. Area contains a variety of natural resources, including a variety of tree species and structures, intermingled grasslands or meadows, diversity of wildlife habitats and wildlife: Medium Notes: Mixed amount of natural resource diversity. Semi-desert grassland through pinyon-juniper. Steep rocky canyons.
Overall Undeveloped Rank – High					
Subset of Undeveloped Ranking	1. Area is free from human disturbance: High Notes: Has only minor improvements and appears free of human disturbance. There is a stock trail; a hiking trail; livestock grazing and some hunting. Gas and oil leases, but none are developed. The southwest corner has roads and evidence of vegetation management activities.				
Overall Opportunity Rank – High					
Subset of	1. Area provides physically and	2. Opportunity to	3. Opportunity to engage in	4. Degree of primitive ROS	

Opportunity Rankings 1-4	mentally challenging recreation opportunities that promote adventure and self-reliance: High Notes: Most of the area provides challenging recreation opportunities. This is a steep and rugged uplift.	experience solitude and isolation from human activities while recreating in this area: High Notes: Significant feeling of being alone or remove from civilization. Area is very quiet and has a feeling of isolation.	primitive and unconfined recreation such as backpacking, kayaking, hunting fishing, etc: High Notes: There are many opportunities for engaging in primitive recreation. Backpacking, hiking, hunting, wildlife viewing.	settings: Medium Notes: Some of the area is classified as primitive or semi-primitive non-motorized.	
Overall Special Features Rank – Medium					
Subset of Special Features Rankings 1-3	1. Area contains outstanding or distinct features like rock formations, panoramic views, etc: Medium Notes: Some distinct features. Views of Vermillion Cliffs. Steep canyons, rock formations.	2. Area has potential for scientific research, environmental education, or historic/cultural opportunities: High Notes: Good potential for 2 or more types of opportunities. Pediocactus and cultural resources.	3. Area contains unique or rare species of plants and/or animals: Medium Notes: Area has few unique or rare plants and/or animals. Pediocactus, condors.		
Overall Manageability Rank – High					
Subset of Manageability Rankings 1-2	1. Ability to manage the area for wilderness character including distance and influence from outside activities; opportunities to access the area; and resource conflicts or encumbrances: High Notes: Isolated from areas of activity; controlled or limited access; no encumbrances or resource conflicts.	2. Area boundaries are recognizable: High Notes: Majority of the boundary follows features that can be easily found and are identifiable on the ground.			

Figure 3. North Kaibab District inventory of potential Wilderness evaluated for capacity.



In summary, two large polygons have been identified to be carried forward to the availability segment of the potential wilderness area evaluation. A number of small polygons have also been identified as having value for addition to existing designated wildernesses.

Availability Analysis

Areas determined to meet wilderness capability requirements are considered potentially available for wilderness designation. The determination of availability is conditioned by the value and need for the wilderness resource compared to the value and need for other resources. Other resource potentials include current use and potential future use. 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 an area must also be considered. The Forest Service should have sufficient control to prevent development of incompatible uses that would negatively affect wilderness character and potential. This section will compare resource tradeoffs and consequences and measures considered to avoid or minimize the impact to wilderness characteristics.