

**Wilderness Need Assessment**  
**for**  
**Evaluation of Potential Wilderness Areas**  
**Ashley National Forest**

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With assistance from the Forest Plan Interdisciplinary Team  
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### **FSH1909.12\_72.31: Wilderness Need Evaluation Factors**

Determine the need for an area to be designated as wilderness through an analysis of the degree to which it contributes to the overall National Wilderness Preservation System. Demonstrate this need through the public involvement process, including public input to the evaluation report. Deal with “need” on a regional basis and evaluate such factors as the geographic distribution of areas and representations of landforms and ecosystems.

In determining whether there is a need to recommend a potential wilderness area for wilderness study or designation, at a minimum consider the following factors (from the handbook):

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.

*See "National Scale" – "Recreational Contribution" and "Regional Scale" - "Demand for Wilderness Recreation Opportunities Near the Wasatch Front" below.*

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

*See "National Scale" – "Recreational Contribution" and "Regional Scale" - "Demand for Wilderness Recreation Opportunities Near the Wasatch Front" below. Additional data indicates a rapid increase in OHV activities at the national level and across the west. However, the 1999 to 2002 National Survey on Recreation and the Environment states that 36 percent of participants over 16 years of age said they had visited a wilderness or primitive area within the previous year.*

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

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.

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

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, sub-regional, and regional needs."

### **National Scale - Considerations and Assumptions**

The two main mandates for wilderness are protecting native ecosystems and their components, and providing for recreational pursuits in primitive settings. The factors from the handbook tie directly to the main purposes of wilderness and the appropriate evaluation scale. The scale for the need evaluation

is best supported by looking first at the national and region information on existing wilderness ecosystems and recreational use.

**Ecological Contribution:** Below are points used to help develop the regional and individual potential wilderness area wilderness need evaluations for ecological contributions to the National Wilderness Preservation System.

- Ecosystems change with human use. Natural ecosystems can help with the advancement of science. While wilderness is only one of the options for retaining native ecosystems, retaining these systems is one of the reasons for wilderness. The ideal wilderness system, then, would include representatives of every possible native ecosystem within the land-base, at a scale large enough to ensure that the ecosystem is sustainable over the long term.
- The loss of species is of concern to the scientific community because species diversity is considered an indicator of human resiliency and survival. Some species require primitive habitats to survive, and are at risk for extinction. Wilderness designation is one of the ways to help provide for survival of those species.
- Concentrated recreation or other human uses can degrade ecosystem components and threaten survival of species requiring primitive habitats.

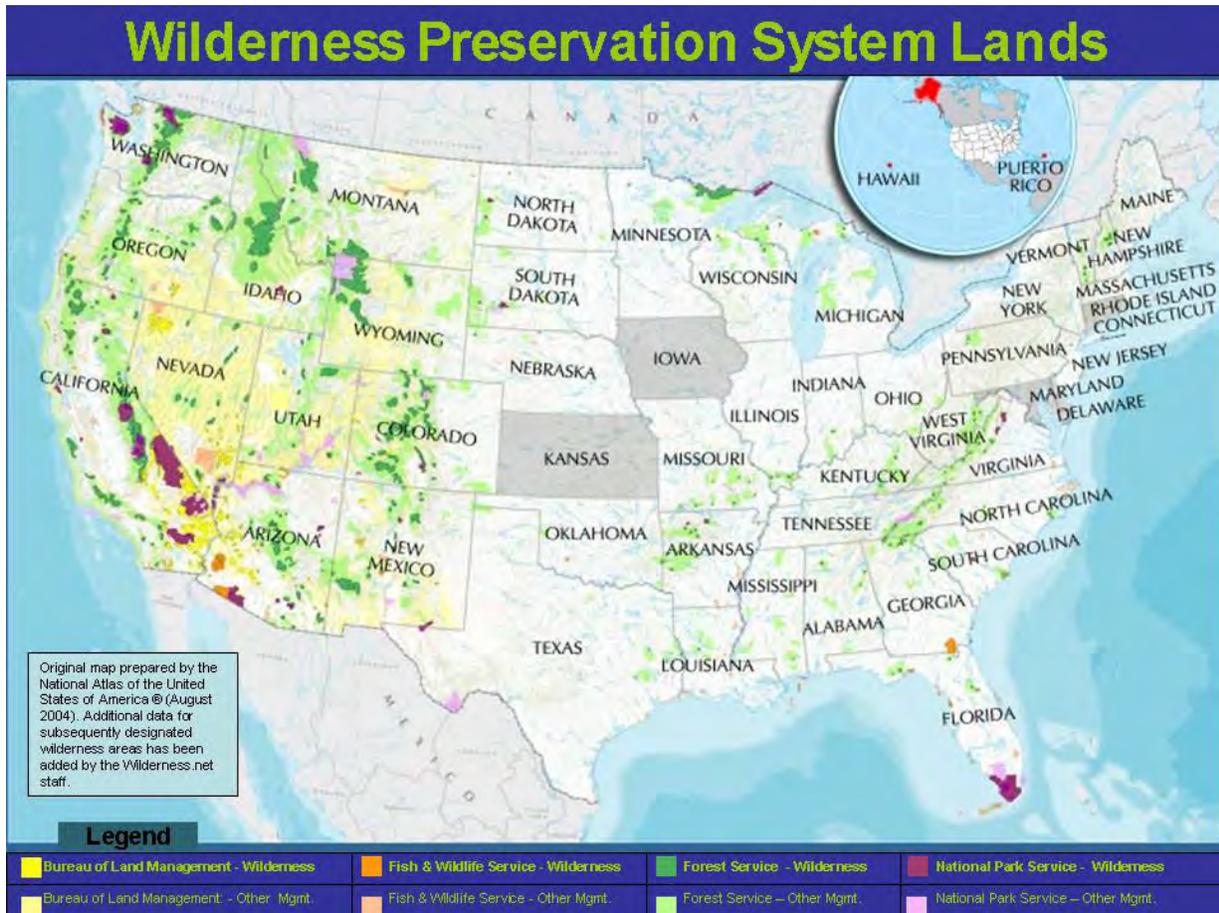
It follows, then, that an area would have an ecological contribution if it offered unique ecosystems or ecosystem components, and/ or would provide habitat that contributes to the survival of species. Further, if an area would help by reducing recreation effects on another area, then it would provide an ecological contribution to the NWPS.

**Recreational Contribution:** Another of the purposes of wilderness is to provide opportunities for solitude and primitive recreation. Existing wildernesses, many near urban centers, have degraded qualities due to overuse; they are being "loved to death". A recommendation leading to additional wilderness would help mitigate this degradation by providing alternative destinations, and thereby help reduce or at least limit increases in visitation pressures on existing wilderness. The potential result of additional wilderness, then, would be improved opportunities for primitive recreation in wilderness over the long term as well as ecological conservation.

- Recreation demand (value) and appreciative value of wilderness can generally be linked to a population base nearest to the wilderness. This assumption can be validated with use data from various demographic densities for wilderness, other types of recreational use areas, and demographic information about surrounding areas.
- If the population near a wilderness is large and growing, public demand for wilderness in the vicinity is also growing. From a recreation perspective, the greater the population density of an area served by wilderness, the greater the need for additional wilderness. Use data supports this assumption.
- If visitor pressure on wilderness is causing degradation to wilderness qualities, including a decline in the quality of primitive opportunities, then it seems logical that additional wilderness in the same general area would help offset the effects of visitors to the existing wilderness if the additional wilderness offers high quality recreation settings and opportunities.

- The Forest Service provides a variety of recreation settings and opportunities. Opportunities for unconfined outdoor recreation can be provided outside of wilderness. In some situations these opportunities may also help reduce visitor pressure on wilderness. However, many visitors wish specifically to visit designated wilderness over visiting other undeveloped areas.
- Increasing wilderness visitation and other human uses can be managed in ways which minimize the effects of those uses to wilderness qualities. However, the capacity of the land to sustain increasing uses without irreversible effects to ecosystem integrity and other values is limited.
- In order for an area to contribute recreational opportunities generally found in wilderness, its boundary should be easily accessed by common means of transportation (mostly automobiles). Take-off points, such as trailheads and parking areas, should be available to facilitate the area's recreational use.

Figure 1: Agency management and Wilderness lands across the nation

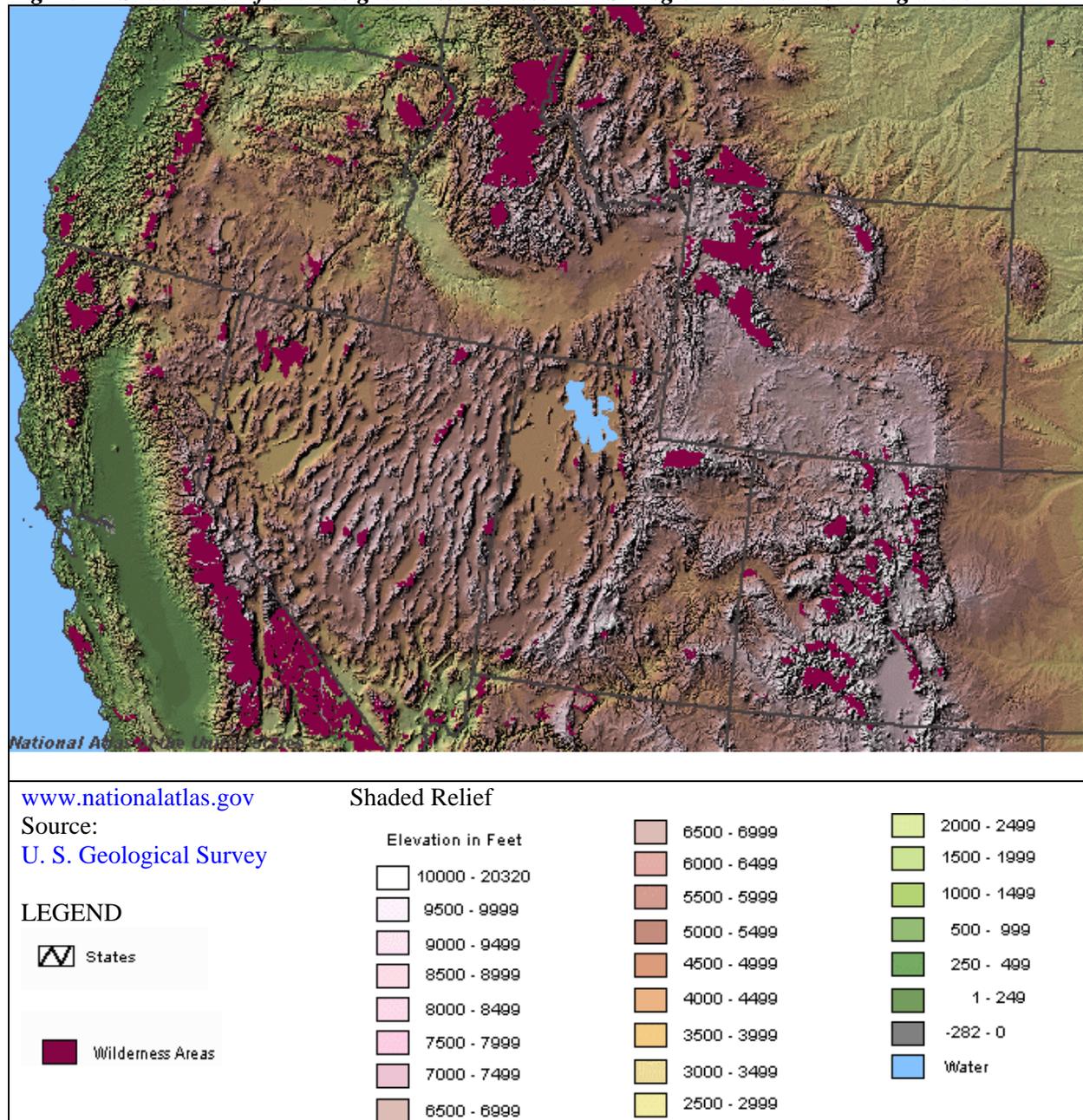


Source: [www.wilderness.org](http://www.wilderness.org)

### Regional Scale Data and Assumptions

**Ecological Representation in the NWPS:** Map data from the Great Basin and surrounding area, including all of Forest Service Region 4, was compared used to determine what larger scale ecosystem characteristics are currently represented in wilderness. The majority of existing wildernesses areas were found to have similar ecological characteristics as shown below. The potential to provide habitat for species at risk is also documented.

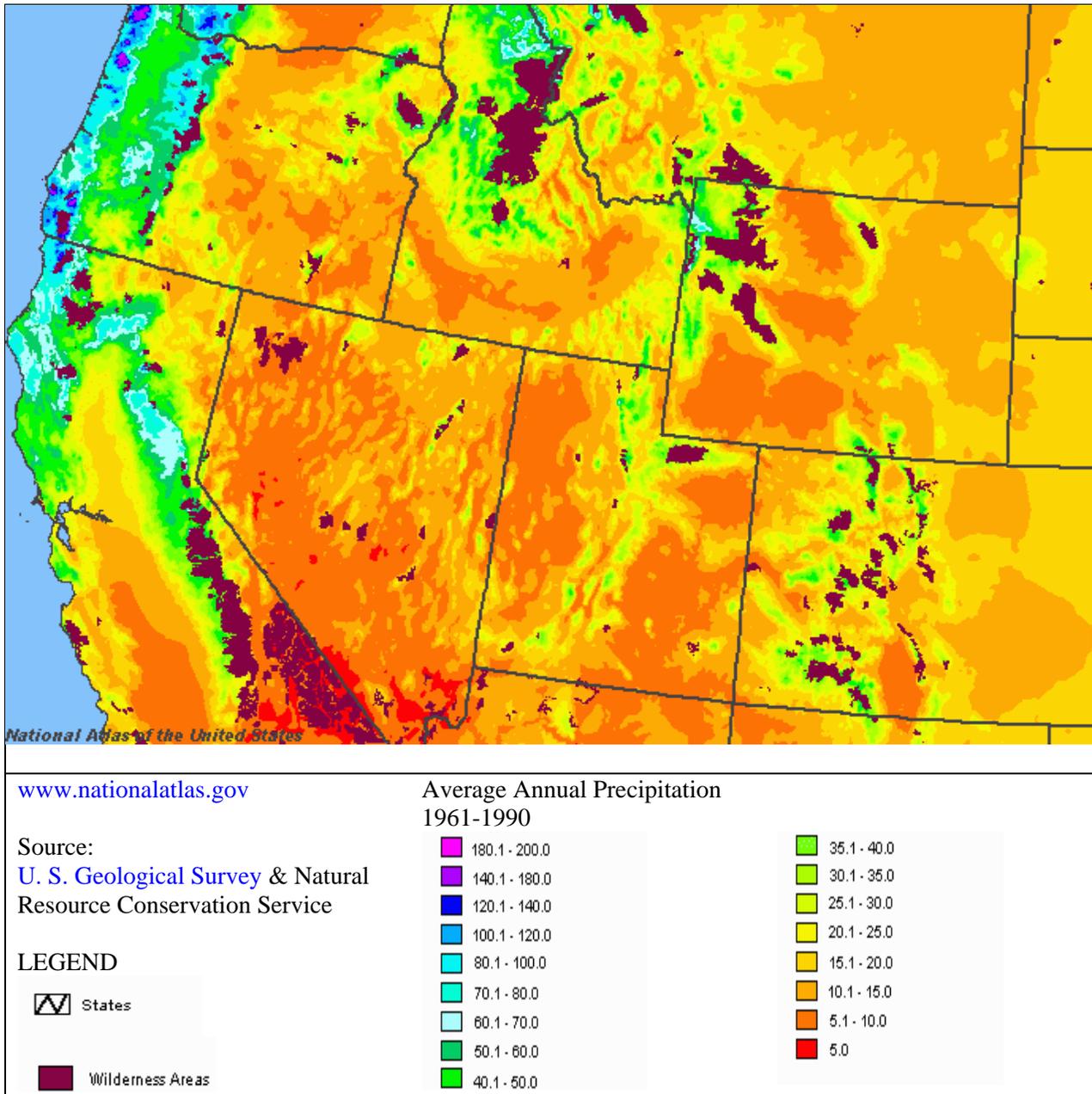
Figure 2: Shaded Relief and designated Wilderness in F.S. Region 4 and surrounding areas.



Existing wilderness areas of the Rocky Mountains and Great Basin are mostly located along the tops of ridges and upper slopes of mountainous areas.

Underrepresented ecosystem components are likely to be found on topography at mid-slope, along the foothills, and in the plains or valleys.

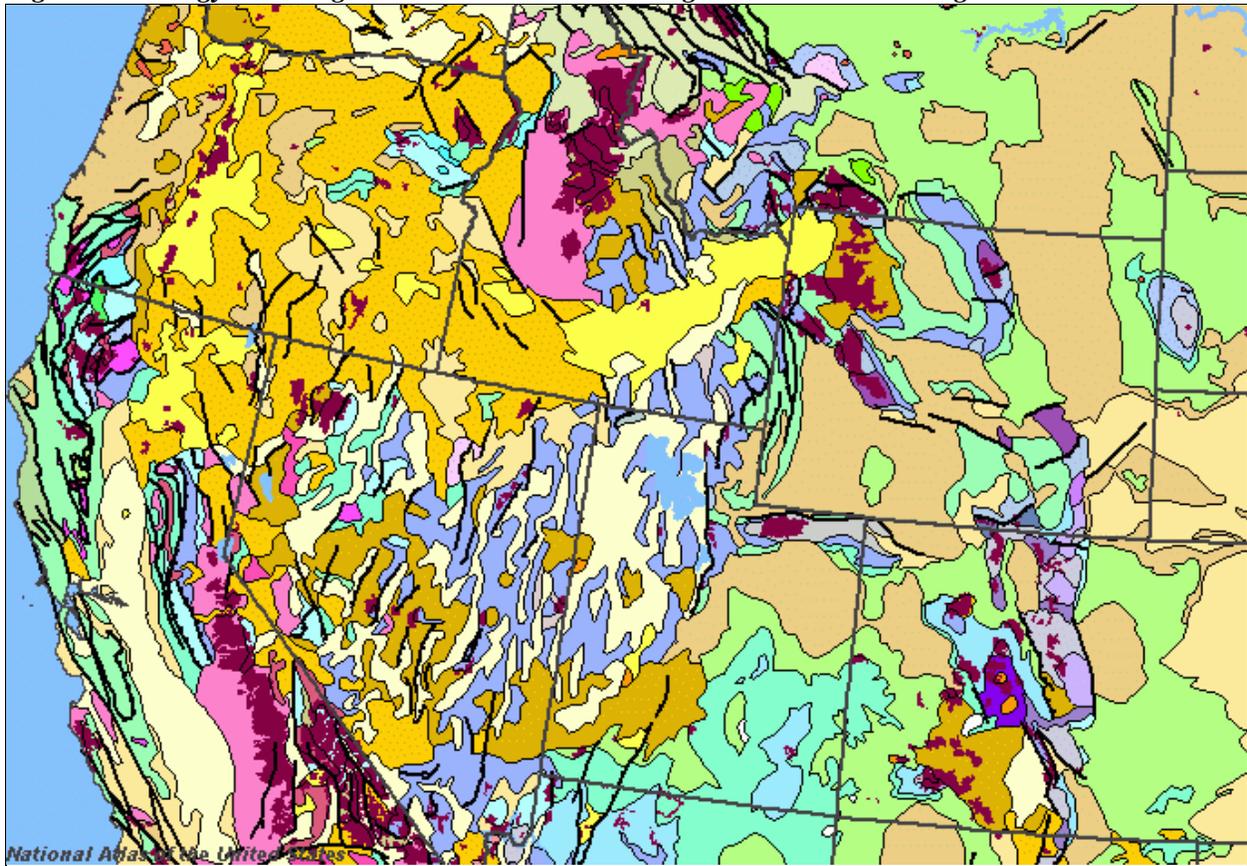
Figure 3: Average Precipitation and designated Wilderness in F.S. Region 4 and surrounding areas.



Most designated wilderness areas across the west are located in areas with more than 30 inches of average rainfall per year, and/or have more rainfall than the areas around them. The exceptions are in southern California, where Death Valley Wilderness and others are among the driest areas in the U.S. A few small wilderness areas are found in semi-arid areas of western Nevada.

Underrepresented ecosystem components include areas with 5 to 25 inches of average annual precipitation. All but the highest elevation lands on the Ashley National Forest have less than the 25 inches of average annual precipitation, and the highest lands are mostly in existing wilderness.

Figure 4: Geology and designated Wilderness in F.S. Region 4 and surrounding areas.



[www.nationalatlas.gov](http://www.nationalatlas.gov)

Source:

U. S. Geological Survey

( See Legend on Following Page)

LEGEND

 States

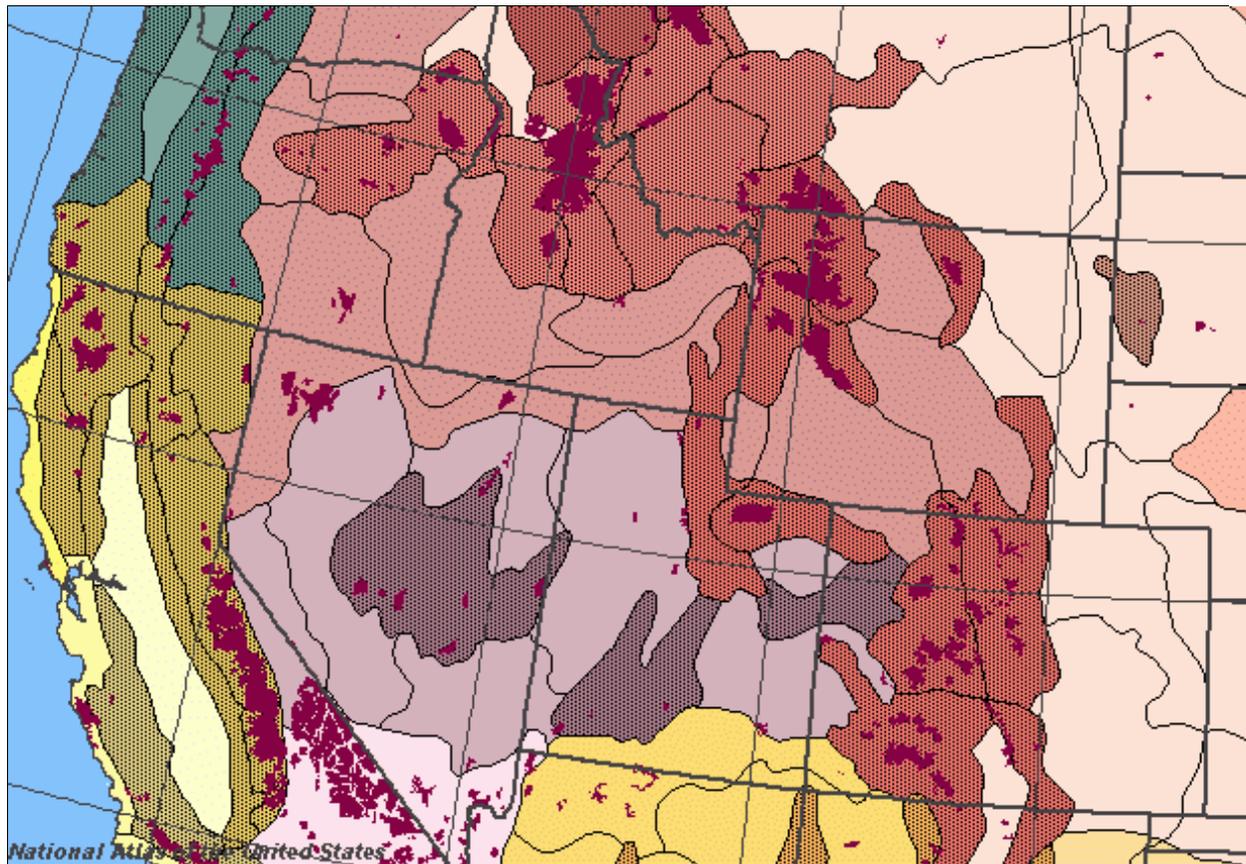
 Wilderness Areas

Legend: Geologic Types		Source: USGS	
<b>Sedimentary Rocks</b> (includes mixed sedimentary and volcanic rocks)		<b>Volcanic Rocks</b>	
Q Quaternary nT Neogene pgT Paleogene KT Cretaceous and Tertiary K Cretaceous M Mesozoic IM Lower Mesozoic (Triassic and Jurassic) PM Paleozoic and Mesozoic P Paleozoic uP Upper Paleozoic (Pennsylvanian and Permian) mP Middle Paleozoic (Silurian, Devonian, and Mississippian) lP Lower Paleozoic (Cambrian and Ordovician) ZP Late Proterozoic and lower Paleozoic P Proterozoic Z Late Proterozoic Y Middle Proterozoic X Early Proterozoic A Archean	Qv Quaternary Tv Tertiary nTv Neogene TOv Tertiary and Quaternary pgTv Paleogene KTv Cretaceous and Tertiary Mv Mesozoic Kv Cretaceous IMv Lower Mesozoic (Triassic and Jurassic) PMv Paleozoic and Mesozoic mPv Middle Paleozoic Pv Paleozoic lPv Lower Paleozoic ZPv Late Proterozoic and lower Paleozoic Zv Late Proterozoic W Middle Proterozoic Xv Early Proterozoic	<b>Plutonic Rocks</b> (Suffix "g" indicates granitic rocks; "i," intermediate "m," mafic rocks; "u," ultramafic rocks; "a," anorthosite)	Yg Middle Proterozoic Yn Middle Proterozoic Xg Early Proterozoic Xn Early Proterozoic Ag Archean u Age uncertain
		<b>Metamorphic Rocks</b> (Suffix "n" indicates gneisses and associated rocks)	
		Pn Paleozoic ZPn Late Proterozoic and lower Paleozoic Zn Late Proterozoic Yn Middle Proterozoic Xn Early Proterozoic An Archean T Age uncertain	
		<b>Glacier</b> Geologic contact Fault—Dashed where inferred Normal fault Thrust fault Low-angle detachment fault Strike-slip fault	

Designated wilderness areas include geologic types found in the High Uintas Wilderness. Most of the other geologic types on the Ashley National Forest are not found in existing Wilderness.

Underrepresented ecosystem components include areas with sedimentary rock types found on the Southern Unit and along the southern and eastern parts of the Uinta Mountains.

Figure 5: Ecoregions(Bailey) and designated Wilderness in F.S. Region 4 and surrounding areas.



[www.nationalatlas.gov](http://www.nationalatlas.gov) Source: U. S. Geological Survey

**LEGEND**

States

Wilderness Areas

**Bailey –Ecoregions: Provinces and Sections**

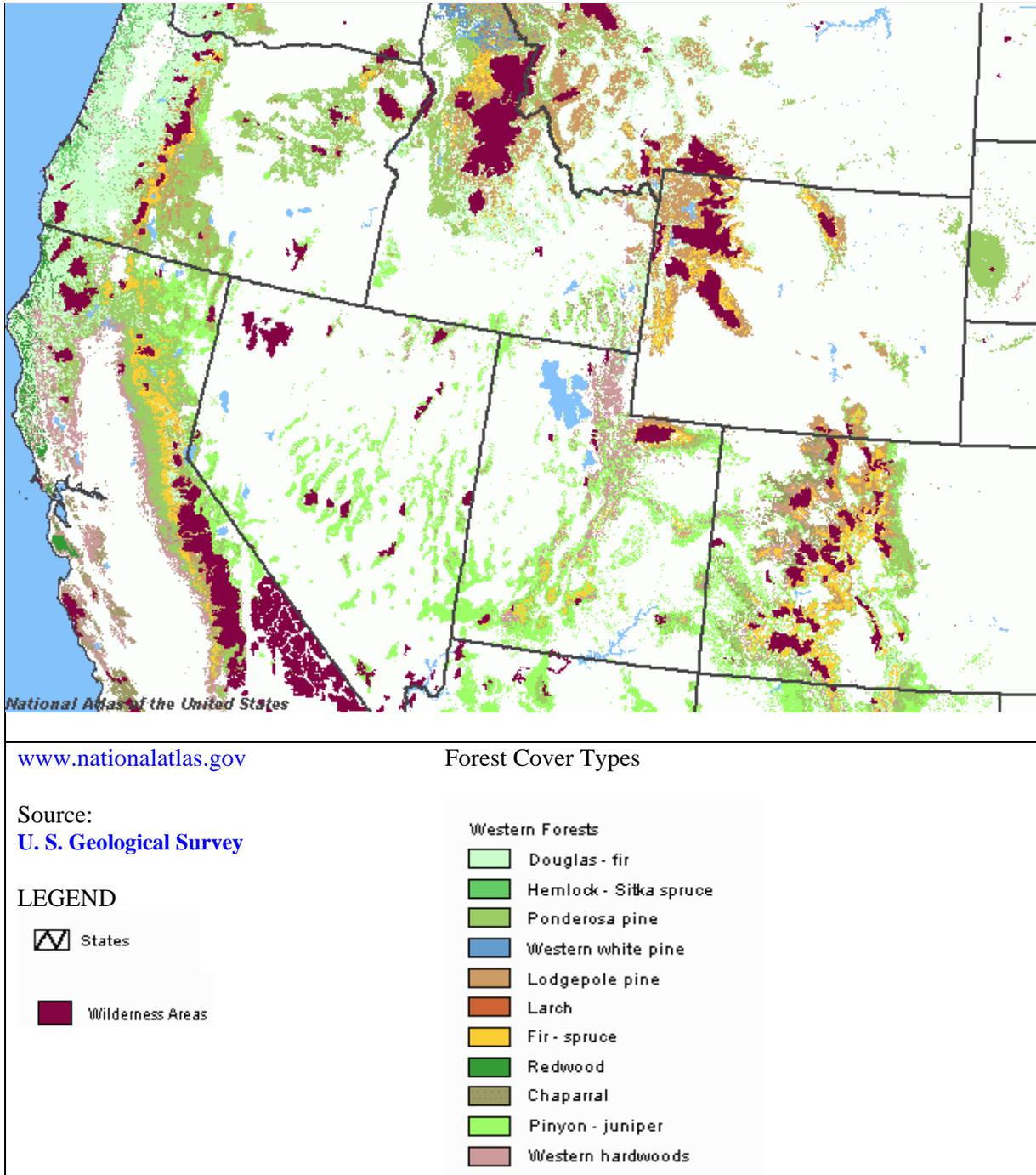
<ul style="list-style-type: none"> <li>□ American Semidesert and Desert Province</li> <li>□ Temperate Steppe Division</li> <li>□ Great Plains-Palouse Dry Steppe Province</li> <li>□ Great Plains Steppe Province</li> <li>□ Temperate Steppe Division - Mountain Province</li> <li>□ Southern Rocky Mountain Steppe --Open Woodland --Coniferous Forest --Alpine Meadow Province</li> <li>□ Middle Rocky Mountain Steppe --Coniferous Forest-Alpine Meadow Province</li> <li>□ Northern Rocky Mountain Forest-Steppe --Coniferous Forest-Alpine Meadow Province</li> </ul>	<ul style="list-style-type: none"> <li>□ Temperate Desert Division</li> <li>□ Intermountain Semidesert and Desert Province</li> <li>□ Intermountain Semidesert Province</li> <li>□ Temperate Desert Division - Mountain Provinces</li> <li>□ Nevada-Utah Mountains Semidesert --Coniferous Forest-Alpine Meadow Province</li> <li>□ Mountains with altitudinal zonation. These provinces are named for the spectrum of zones from lower to upper (subnival); e.g. semi-desert-coniferous forest-alpine meadow</li> </ul>
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Note: Above legend is partial, see web source for additional legend

Several designated Wilderness areas are located within the same province, and some are within the same sections as are found on the Ashley National Forest. At a smaller scale, many of the subsections and landtypes found on the Ashley National Forest are not represented within existing wilderness. (see narratives for ANF Potential Wilderness Areas)

Underrepresented ecosystem components include components of Subsections and Landtype Associations (further division of Provinces and Sections)found in ANF potential wilderness areas.

Figure 6: Forest Cover Types and designated Wilderness in F.S. Region 4 and surrounding areas.



Much of the designated wilderness across the west has predominantly coniferous Forest cover with inclusions of rock peaks, moist meadows, and aspen or hardwoods and shrubs. A few small wilderness

areas in Nevada provide a sample of pinion-juniper forest types. Drier grasslands and shrub lands (sagebrush and others) are uncommon.

Underrepresented ecosystem components include areas with semi-arid vegetation types such as sagebrush, sagebrush/grasslands, pinion/ juniper, and pinion/ juniper/ Douglas-fir vegetation types. These types are found in lower elevations on the Ashley National Forest.

**Figure 7: Species at risk**

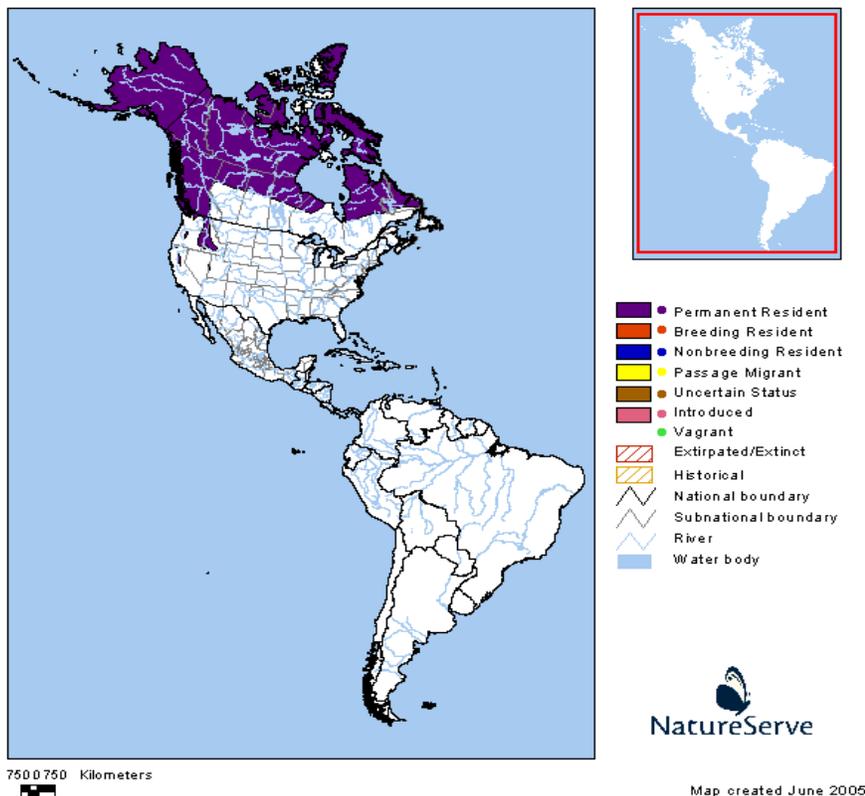
Threatened, Endangered, Sensitive and Rare Species that could be on Ashley National Forest	Does this species demonstrate an inability to survive in less than primitive surroundings ?	Reference/Rationale	Species carried forward for further evaluation
Bald eagle	no	Primary habitat need is lower elevation, cottonwood trees. (UDWR 2003)	no
Mexican Spotted owl	no	Requires cliff habitat, habitat not developable (USFWS 2005)	no
Humpback chub	no	No habitat available (USFWS 2002)	no
Bonytail chub	no	No habitat available (USFWS 2002)	no
Colorado pikeminnow	no	No habitat available (USFWS 2002)	no
Razorback sucker	no	No habitat available (USFWS 2002)	no
Canada lynx	no	Species is at southern most range – no documented sightings on the Forest since 1972. LAU's exist forest-wide outside existing wilderness areas. (ANF 2007)	no
Peregrine falcon	no	Cliff habitat requirement, adaptable to development provide, lower elevation species (UDWR 2003)	no
Greater sage-grouse	no	Lower elevation species (UDWR 2003)	no
Yellow-billed Cuckoo	no	Lower elevation species (UDWR 2003)	no
Flannelmouth sucker	no	No habitat (UDWR 2006)	no
Roundtail chub	no	No habitat (UDWR 2006)	no
Colorado River cutthroat trout	no	Species will thrive in developed areas given quality habitat (CRCT CAS 2006)	no
Eureka (Uintah) mountainsnail	no	Available information insufficient, ANF 2006)	no
Northern goshawk	no	Current literature/data indicates survival and reproduction is successful in less than primitive areas (ANF 2007)	no
Boreal owl	no	Primary threat is over-harvesting and structural change in timber stands. (Natureserve 2007), (Hayward &Hayward 1993)	no
Sage sparrow	no	Lower elevation species, very little habitat available (Natureserve 2007)	no
Burrowing owl	no	Lower elevation species, very little habitat available (UDWR 2003)	no
Ferruginous hawk	no	Lower elevation species, very little habitat available (UDWR 2003)	no
Grace's warbler	no	Species found in abundance in highly managed	no

Threatened, Endangered, Sensitive and Rare Species that could be on Ashley National Forest	Does this species demonstrate an inability to survive in less than primitive surroundings ?	Reference/Rationale	Species carried forward for further evaluation
		Forests (Natureserve 2007)	
Black-throated gray warbler	no	Local populations secure (Natureserve 2007)	no
Gray flycatcher	no	Local populations secure (Natureserve 2007)	no
Black rosy finch	no	Summer habitat preference is high elevation rocky areas above timberline (Natureserve 2007)	no
Lewis's woodpecker	no	Few documented local sightings, primarily threatened by riparian degradation and nesting competition with European starlings is (UDWR 03,NServe07)	no
Flammulated owl	no	Populations are vulnerable in Utah (Natureserve 2007) however species is common on Ashley. (ANF 2006)	no
Wolverine	yes	Data shows negative correlation between species presence and human activity (UDWR 2003)	yes
Three-toed woodpecker	no	Species is common on the Ashley (UDWR 2003)	no
Broad-tailed hummingbird	no	Utah populations are vulnerable however secure in neighboring states suggesting lack of data in Utah (Natureserve 2007)	no
Williamson's sapsucker	no	Utah populations are vulnerable however secure in neighboring states suggesting lack of data in Utah (Natureserve 2007)	no
Brewer's sparrow	no	Sage brush obligate, secure in Utah (Natureserve 2007)	no
Great gray owl	no	Ashley NF outside of range (Natureserve 2007)	no
Virginia's warbler	no	Local population is secure (Natureserve 2007)	no
Osprey	no	Main population is focus in and around FGR.	no
Pallid bat	no	Local populations are secure (Natureserve 2007)	no
Pygmy rabbit	no	Limited habitat - only on FGNRA in Wyoming. (ANF 2007)	no
Townsend's big-eared bat	no	Specialized habitats already protected (ANF 2007)	no
American pika	no	Habitat requirements (boulder/talus) not at	no
American marten	no	Species is at southern most range – local populations low (UDWR 2003)	no
Fringed myotis	no	Specialized habitats such as caves and cliffs are not heavily used for recreation (ANF 2007). Data lacking on species (UDWR 2003)	no
Yuma myotis	no	Specialized habitats such as caves and cliffs are not heavily used for recreation. (ANF 2007)	no
Northern flying-squirrel	no	Because of nocturnal lifestyle very little interaction with humans, needs trees (Natureserve 2007)	no
Black-necked stilt	no	Lower elevation species, habitat lacking (ANF 2007)	no
American avocet	no	Lower elevation species, habitat lacking (ANF 2007)	no

Threatened, Endangered, Sensitive and Rare Species that could be on Ashley National Forest	Does this species demonstrate an inability to survive in less than primitive surroundings ?	Reference/Rationale	Species carried forward for further evaluation
Gray vireo	no	Southwest US species, Ashley NF is outside of breeding range (Natureserve 2007)	no
Great Basin pocket mouse	no	Utah populations are stable ( Natureserve 2007)	no
Cliff chipmunk	no	Utah populations are stable ( Natureserve 2007)	no
Rubber boa	no	Insufficient information	no
Smooth greensnake	no	Insufficient information	no
Northern plateau lizard	no	Possibly on Flaming Gorge NRA only (Natureserve 2007)	no
Tree lizard	no	Population is stable in Utah (Natureserve 2007)	no
Western toad	no	Aquatic habitat dependent, will survive in less than primitive (UDWR 2003)	no
Bluehead sucker	no	No habitat (UDWR)	no
Spotted bat	no	Specialized habitats such as caves and cliffs are not heavily used for recreation. (ANF 2007)	no

Wolverine is the only species from the above list needing consideration in potential wilderness area need evaluation because it meets the criteria of requiring primitive habitat. Wolverine habitat consists of tundra, boreal forests, and the coniferous forests of western mountains. The figure below illustrates the distribution of wolverine across the western mountains.

Figure 8: Distribution of wolverine.



The ANF is at the southern extreme of the habitat range for wolverine. Although habitat exists in the High Uintas Wilderness and nearby areas, no wolverine sightings have been documented on the Forest for several years; existing habitat for wolverine, in designated and potential wilderness is considered unoccupied. Recommendation or designation of additional wilderness is unlikely to affect the survival of wolverine.

In summary, Ashley National Forest lands at mid-slope or lower, with moderate precipitation, geology unique from existing wilderness, and/or with grassland, shrub-grassland, or pinion/juniper vegetation types would contribute underrepresented ecosystem components to the NWPS, and therefore meet wilderness need.

### **Demand for Wilderness Recreation Opportunities near the Wasatch Front**

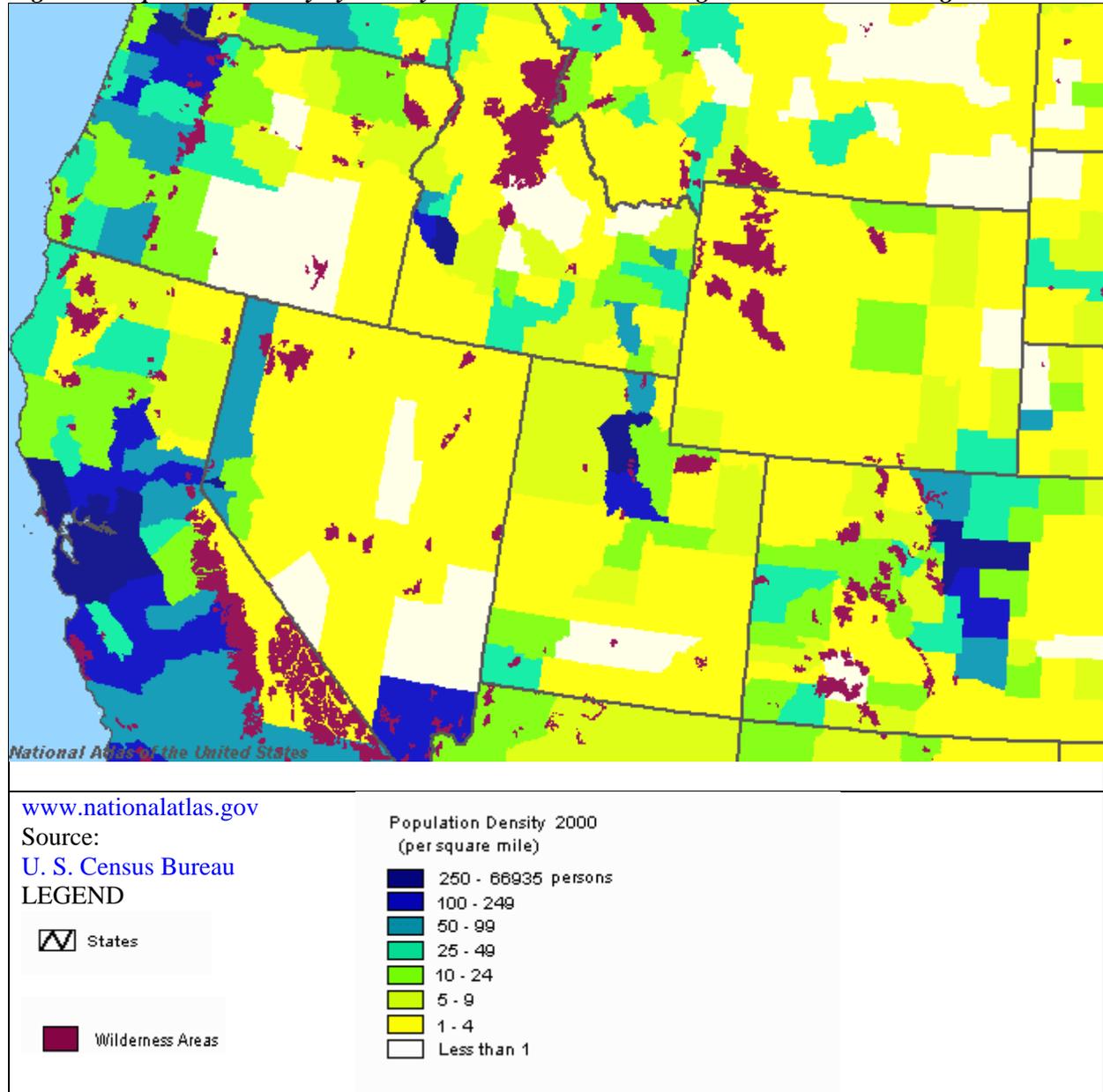
Considerations for determining whether more wilderness is needed to meet recreational demand include the amount of wilderness available to nearby residents, the number of residents in the vicinity, population trends there, the current and predicted use in the existing wilderness, and existing and predicted effects to wilderness resource. The general considerations for Ashley National Forest are described below. Other considerations, such as the quality of recreation offered by the potential area, are site specific and determined separately for each potential wilderness area.

1. The majority of recreation visitors to the Ashley National Forest are from communities within about a half-day drive of the Forest (see NVUM report). The largest constituency for recreation in existing and potential wilderness resides in the populated areas from Brigham City to Nephi, Utah, along Interstate 15, (the Wasatch Front). Salt Lake City and its suburbs, Provo, Orem, and Ogden have the highest population densities in Utah and in the Great Basin. All of these urban areas are within 250 miles of several designated wilderness areas and potential wilderness areas on the Ashley N.F. From 1990 to 2005 these cities were among the fastest growing in the nation, and together are home to about 1.3 million people (2007 governor's report). Population increases are expected to continue at a slightly reduced rate, but are expected to increase as much as 50 percent during the next 30 years.
2. The Ashley and Wasatch-Cache National Forests manage the 456,705 acre High Uintas Wilderness. Mt Nebo, Mt Timpanogos, Mt Naomi, Mt. Olympus, Twin Peaks, Wellsville Mountains, and Lone Peak, Wilderness Areas are located east Salt Lake City and other communities along the Wasatch front, and are part of the Wasatch-Cache and Uinta National Forests. These areas are within 175 air miles of all Ashley National Forest lands. Deseret Peak and Cedar Mountain Wilderness Areas are west of Salt Lake City and slightly further from the Forest. All of these areas and the High Uinta Wilderness are likely visited the visitors described above. Additionally, there are many places on public lands in the vicinity of Wasatch Front communities that offer primitive recreation opportunities even though they are not designated as wilderness.
3. Current and predicted wilderness recreation use. According to the National Visitor Use Monitoring Report about one million people visited wilderness each year in FS Region 4. The monitoring process has only been in place for about 7 years, and has gone through changes that

reduce its viability as a predictor of trends in visitor preferences. Only one year of data is available for the Ashley National Forest.

- Major state and federal highways connect the communities along the Wasatch Front to the Ashley National Forest and/ or communities along the Forest perimeter in Wyoming and the Uintah Basin of Utah. Several access routes from these highways into the forest are paved; others have a constructed gravel surface.

**Figure 9: Population Density by County & Wilderness in F.S. Region 4 and Surrounding Areas**



**Figure 9: Table of Wilderness areas within ½ day drive of Salt Lake City, Utah**

WILDERNESS NAME	AGENCY	ACREAGE (in acres)	YEAR DES	Approx travel distance & direction from Salt Lake City
Cedar Mountain Wilderness Area	BLM	100,000	2006	70 miles west
Deseret Peak Wilderness	FS	25,212	1984	70 miles WSW
High Uintas Wilderness	FS	456,705	1984	80 miles east to the western edge
Lone Peak Wilderness	FS	30,088	1978	25 miles SSE
Mount Naomi Wilderness	FS	44,523	1984	95 miles north
Mount Nebo Wilderness	FS	28,022	1984	70 miles south
Mount Olympus Wilderness	FS	15,300	1984	20 miles east
Mount Timpanogos Wilderness	FS	10,518	1984	50 miles SE
Twin Peaks Wilderness	FS	11,396	1984	20 miles east
Wellsville Mountain Wilderness	FS	20,988	1984	75 miles north

**Wilderness Areas within 4 hours drive of Wasatch Front Communities**

**10 Areas for a Total of 575 acres**

In summary, additional wilderness on the Ashley National Forest could contribute to the NWPS by providing additional wilderness recreation near the high population density along the Wasatch front, where effects to existing wilderness from concentrated recreation use are occurring and likely to increase. On the other hand, wilderness opportunities are not so rare as to make all the areas contributors from a recreation standpoint. It is most probable that the Ashley National Forest potential wilderness area would contribute to NWPS recreational opportunities only if it provides those opportunities in a setting that is likely to attract visitors that would otherwise visit heavily used parts of existing wilderness.