

## TOPIC 5 – ROADLESS/WILDERNESS

### ROADLESS AREAS

#### Introduction

“Roadless Areas” refer to areas that are without constructed and maintained roads, and that are substantially natural. Some types of improvements and past activities are acceptable to be included in roadless areas.

In the past, roadless areas were only looked at for their potential for wilderness recommendation. It is now recognized that roadless areas have significant ecological, as well as social values. The values of roadless are of both local and national significance. Roadless areas are often aquatic strongholds for fish; provide critical habitat and migration routes for many wildlife species especially those requiring large home ranges and key watershed areas for communities and wildlife. The recognition of the values of roadless areas is increasing, as the population continues to grow and as the demand for outdoor recreation and other uses of the forests increases. These unroaded and undeveloped areas provide the Forest with opportunities for potential wilderness areas, non-motorized and limited motorized recreation, and other commodity and amenity uses.

This section describes and evaluates the effects to wilderness characteristics within inventoried roadless areas and the effects to roadless area values.

#### Laws, Policy, and Direction

- **The Code of Federal Regulations at (36 CFR 219.17(a)):** States that roadless areas shall be evaluated and considered for recommendation as potential wilderness during the forest planning process.
- **The Forest Service Handbook (1909.12.7.1):** Directs to identify and inventory all roadless areas and details the means by which the capability, availability, and need for potential wilderness areas is assessed.
- **The Intermountain Draft Roadless Inventory and Evaluation Guide (dated 06/30/98):** expands upon the Forest Service Handbook on the inventory and evaluation phases of roadless area analysis.
- **The Roadless Area Conservation Final Rule and Record of Decision (36 CFR Part 294):** Establishes prohibitions on road construction, road reconstruction, and timber harvesting in inventoried roadless areas on National Forest System lands. Its intent is to provide lasting protection for inventoried roadless areas within the National Forest System in the context of multiple-use management. This Rule is currently being reviewed by the new administration until at least May 12.

## Affected Environment

There are 36 roadless areas on the Wasatch-Cache National Forest, totaling approximately 605,903 acres. This represents 49 percent of Wasatch – Cache National Forest Service acres. The Mount Naomi, Swan Creek and Gibson roadless areas are shared with the Caribou National Forest. Nobleetts and White Pine roadless areas are shared with the Uinta National Forest. Widdop Mountain roadless is shared with the Ashley National Forest. The High Uintas roadless is shared with both the Ashley and Uinta National Forests. The Stansbury roadless area is contiguous with the North Stansbury and Big Hollow BLM Wilderness study areas. Most roadless acreage on the Forest is within Utah, except for 652 acres of the High Uintas roadless are in Wyoming.

The previous roadless inventory was completed in 1983 and identified 22 roadless areas totaling 746,431 acres. In 1984, the Utah Wilderness Act was enacted and designated several roadless areas as wilderness, including six on the Forest (High Uintas, Mount Naomi, Wellsville Mountains, Mount Olympus, Twin Peaks and Deseret Peak). The seventh wilderness area on the Forest, Lone Peak was designated wilderness in the 1978 Endangered American Wilderness Act. A new and updated inventory was both needed to address ongoing roadless area management issues and to meet the requirements of the NFMA regulations and the Utah Wilderness Act of 1984. Each undeveloped area on the Forest identified during the inventory contains 5,000 acres or more or was adjacent to an existing wilderness area.

Because different criteria were used for the 1999 inventory than those used in 1983, ten additional areas were identified as roadless. New roadless areas identified were Temple Peak, Right Hand Fork, Mahogany Range, Boulder Mountain on the Logan District, Sugar Pine, Lamb Canyon, Public Grove Hollow and Rock Creek – Green Fork on the Ogden District and Hogsback and the Lone Peak additions on the Salt Lake District. Some roadless areas have been roaded by varying degrees since the 1983 inventory. Parts of areas were excluded from the roadless inventory, if they contained constructed roads and other significant developed features. This caused some 1983 roadless areas like Mount Logan and Frances to be split into multiple areas.

It is important to note that there is a difference between the areas being evaluated for wilderness recommendation in Appendix C and those being evaluated for effects on roadless characteristics. There are five additional roadless areas that are not being evaluated for wilderness consideration but are considered a part of the roadless inventory. All are less than 5,000 acres because of roads, power lines, private land etc identified late in the inventory process. Those areas are:

- Little West Forks Black (was in the 1983 inventory and divided into two separate polygon areas by road)
- Middle Francis (was part of Francis Roadless Area in 1983 inventory)
- South Francis (was part of Francis Roadless Area in 1983 inventory)
- Public Grove Hollow (new area identified on Ogden District and divided into two separate polygon areas by road)
- Lamb Canyon (new area identified on Ogden District)

Table RW-1 displays each roadless area by management area and acreage within each area. The fourth column displays the percentage of each management area that is included in the inventory. Because much of the area is actually private land, the North Wasatch – Ogden Valley appears to be the highest percent of roadless acreage, but if existing wilderness acreage is included, the Stansbury, Cache-Box Elder, and Western Uintas management areas have the highest percents of roadless acreage.

**Table RW-1  
Roadless Area Inventory  
by Management Area**

District	Roadless Area Name By Management Area	Acres	Percent of Management Area Acreage that is Roadless
Logan and Ogden	<b>Bear</b> (4 areas)		48% Roadless
	Swan Creek	9,384	
	Lamb Canyon	4,293	
	Sugar Pine	5,591	
	Rock Creek - Green Fork	5,651	
	<b>Total:</b>	24,919	
Logan and Ogden	<b>Cache – Box Elder</b> (11 areas)		59% Roadless (82% if you include Mount Naomi and Wellsville Mountains Wilderness areas.)
	Gibson	5,347	
	Mount Naomi	45,122	
	Mount Logan North	19,197	
	Mount Logan South	17,001	
	Mount Logan West	5,281	
	Wellsville Mountains	1,763	
	Mollens Hollow	17,676	
	Temple Peak	23,379	
	Boulder Mountain	8,845	
	Mahogany Range	11,400	
Right Hand Fork Logan	15,011		
	<b>Total:</b>	170,022	
Salt Lake	<b>Central Wasatch</b> (10 areas)		30% Roadless (68% if you include Mount Olympus, Twin Peaks and Lone Peak Wilderness areas)
	Lone Peak	874	
	Twin Peaks	6,490	
	Mount Olympus	10,139	
	White Pine	2,059	
	Mount Aire	9,701	
	<b>Total:</b>	29,263	
Evanston – Mountain View	<b>Eastern Uintas</b> (3 areas)		24% Roadless (68% if you include portion of High Uintas Wilderness area)
	Widdop Mountain	7,997	
	Little West Fork Blacks	4,634/3,845	
	High Uintas (part of)	56,992	
	<b>Total:</b>	73,468	
Ogden	<b>North Wasatch – Ogden Valley</b> (10 areas)		89% Roadless
	Willard	20,011	
	Lewis Peak	12,092	
	Upper South Fork	17,255	
	Burch Creek	7,518	
	Public Grove Hollow	3,620/3,158	

District	Roadless Area Name By Management Area	Acres	Percent of Management Area Acreage that is Roadless
	Hogsback Farmington North Francis Middle Francis South Francis <b>Total:</b>	10,946 8,143 4,293 3,294 3,372 126,552	
Salt Lake	<b>Stansbury</b> (1 area) Stansbury Mountains	39,980	58% Roadless (95% including Deseret Peak Wilderness area)
Kamas and Evanston	<b>Western Uintas</b> (3 areas) Nobletts Lakes High Uintas (part of) <b>Total:</b>	3,113 122,019 46,077 171,209	61% Roadless (77% if you include portion of High Uintas Wilderness area.)

Information about state and private inholdings, unconstructed roads, motorized trails and mechanized trails provides perspective about potential tradeoffs should the area be recommended as wilderness.

### Private and State Inholdings

Private and state land was excluded wherever possible from the inventoried roadless areas. There are a few isolated parcels of Utah State and private land that were included, because they were surrounded by large acreages of National Forest roadless land.

Table RW-2 lists state and private land inholdings that are completely within an Inventoried Roadless Area. Table RW-2 does not display private and state lands that are either adjacent to roadless areas or excluded by a cherry-stem (surrounded on 3 sides by roadless). Determining land ownership for non-federal and state lands can be complicated and accuracy depends on when land sales or exchanges have occurred and when that information is recorded with the state and county governments.

**Table RW-2  
Private and State Inholdings  
within Inventoried Roadless Areas**

Roadless Area	Owner	Number of Parcels	Totals
Willard	Private	5	749.8
Willard	Utah State	3	136.0
Mount Olympus	Private	1	54.7
Twin Peaks	Private	5	147.7
Twin Peaks	Salt Lake City	2	128.1
Lakes	Private	2	160.3
White Pine	Private	1	117.0

Roadless Area	Owner	Number of Parcels	Totals
Rock Creek – Green Fork	Private	1	40.3
Francis North	Private	1	39.9
Mount Naomi	Private	1	157.8
Burch Creek	Utah State	1	585.9

### Unconstructed Roads in Inventoried Roadless Areas

Constructed roads were excluded from the inventoried roadless areas; however, unconstructed roads were included. Table RW-3 displays the few unconstructed roads are designated open on District travel plans within inventoried roadless areas.

**Table RW-3  
Unconstructed  
District Travel Plan Roads  
in Inventoried Roadless Areas**

Roadless Area	Road Name/Number (miles)
Lakes	Norway OB 83137 (0.4), Pole Sale 80496 (1.2), Kathy's Spur 0.2), South Fork Weber 80031 (.1)
Willard	Grizzly Peak 20091 (.6)
Mount Logan South	South Fork Millville 4x4 20023 (2.5), Breaks 4x4 20053 (.8)
Mount Logan North	Welches Flat 4x4 20152 (3.6), Logan Peak 20042 (0.9), Pine Spring 20167 (0.3)
Stansbury Mountains	Box Elder Canyon 80584 (0.4)
Lambs Canyon	Big Crawford Creek One 26704 (.1)
Little West Fork Blacks	Upper Little West Fork Blacks 80804 (1.5), Stateline 80393 (4.2), Hewinta Junction 80433 (0.2)

### Motorized Trails in Inventoried Roadless Areas

Motorized trails were included in the inventoried roadless areas. Some trails are only partly included within a roadless area with the rest of the trail outside the roadless area. Only system trails in approved travel plans are included. The Evanston/Mountain View travel plan is currently being revised. Table RW-4 displays motorized trails open within inventoried roadless areas.

**Table RW- 4  
Motorized System Trails  
in Inventoried Roadless Areas**

<b>Inventoried Roadless Area</b>	<b>Number of Motorized Trails</b>	<b>Approximate Mileage in Roadless</b>
Right Hand Fork Logan	4 trails	6.7
Temple Peak	4 trails	9.8
Lewis Peak	4 trails	11.8
Willard	4 trails	11.7
Mollens Hollow	6 trails	6.4
Mount Logan South	3 trails	10.9
Mount Logan North	2 trails	4.4
Twin Peaks	1 trail	2.8
High Uintas	11 trails	15.2
Deseret Peak	4 trails	24.9
Lakes	9 trails	7.7

Source: District Travel Plans. See Roadless Planning Files for detailed listing.

In addition, almost all roadless areas on the Forest have some trails used by mountain bikers. Topic 4 – Recreation includes further information about trails open to mechanized (mountain bike) use and the effects to users of those trails from inventoried roadless area management.

### **Values of Roadless Areas**

Roadless areas possess social and ecological values and characteristics that are becoming scarce in an increasingly developed landscape. They provide unique opportunities for non-motorized and motorized dispersed recreation in a primitive or semi-primitive setting, sources of clean drinking water, and large undisturbed landscapes that offer privacy and seclusion. These areas support a diversity of habitats for native plants and animal species, conserve biological diversity and provide opportunities for study and education. The roadless areas on the Wasatch-Cache National Forest provide these values to differing degrees. Some areas have very large, pristine, undisturbed environments, while others are less diverse and have areas that reveal past or current development and in some cases, resource damage.

### **Inventoried Roadless Area Evaluation for Wilderness Recommendation**

For a more detailed description and map of each roadless area being considered in the wilderness evaluation process, refer to Appendix C of the DEIS.

Additions to the National Wilderness Preservation System are a long-term commitment made only by Congressional designation. During the forest planning process, national forests are required to inventory their roadless areas, evaluate the wilderness values of these areas, and recommend to Congress those areas that meet the capability, availability and need criteria for wilderness designation.

## Environmental Effects

### General Effects

The effects on inventoried roadless areas are evaluated from two different perspectives. First, from the perspective of their value as areas that could potentially be recommended as wilderness. Wilderness characteristics include solitude, the naturalness of the environment, opportunities for primitive recreation and challenging experiences and other special values. Second, inventoried roadless areas also can be evaluated for the values they provide as large undeveloped landscapes. Appendix C describes the wilderness characteristics of each inventoried roadless area. This evaluation assumes areas assigned the 1.5 and 2.6 management prescriptions will maintain the wilderness and roadless characteristics described in Appendix C.

Appendix C of this document contains detailed information about each individual inventoried roadless area, the process used to evaluate the areas, the acreage of specific areas that were recommended for wilderness in each alternative and location maps. Tables are also included in Appendix C that list by alternative the amount of wilderness acres recommended, acres protecting roadless values, acres available for development, acres open for winter snowmobiling and miles of motorized travel plan trails open.

Protection of roadless area values can be evaluated by prescription and by alternative theme. Table RW-6 shows the total inventoried roadless acres protected by prescription 1.5 (recommended for wilderness), and those protected by prescription 2.6 (managed as undeveloped). It also displays the degree to which inventoried roadless areas values are protected by the Roadless Area Conservation Rule (RACR).

In the Forest Plan revision analysis, the Roadless Area Conservation Rule is being applied in Alternatives 1, 2, and 6. Effects on inventoried roadless area management have been evaluated with the consideration that under the RACR, road construction and reconstruction are not allowed in inventoried roadless areas nor is cutting, sale, or removal of timber except: for the cutting, sale or removal of generally small diameter trees which maintains or improves roadless characteristics and: 1) to improve habitat for threatened, endangered, proposed, or sensitive species, or 2) to maintain or restore ecosystem composition and structure, such as reducing the risk of uncharacteristic wildfire effects.

Alternative 1 recommends the largest amount of acreage for wilderness designation, has the greatest amount of acreage managed as 2.6, and applies the National Roadless Area Conservation Rule to all inventoried roadless areas. Because of these factors it affords the most amount of protection to inventoried roadless areas. Alternatives 2 and 6, respectively, also protect large amounts of inventoried roadless acres primarily because of application of the RACR, but also because of the amount of inventoried roadless areas managed as undeveloped or recommended as wilderness. Alternatives 4 and 5 do not specifically manage areas to protect inventoried roadless areas.

Inventoried roadless areas allocated to management prescriptions 1.5, 2.1 to 2.7, 3.1 to 3.2, 4.1 and 4.2 are most likely to retain their undeveloped character. Most of the other prescriptions allow different types of development and modification of the character of the land is more probable. Management prescriptions with more potential to change the character of the land include 4.4 (dispersed motorized recreation), 4.5 (developed recreation), 5.1 and 5.2 (forest vegetation management), 6.1 and 6.2 (range vegetation management) and 8.1/8.2 (concentrated developed areas). Under these prescriptions, there would be some limited road construction, but the presence on the land would increase.

**Table RW-6  
Inventoried Roadless  
Acres Disposition by Alternative**

Prescription	Alternative					
	1	2	3	4	5	6
1.5 Recommended wilderness	360,100	145,900	51,300	0	0	70,000
2.6 Undeveloped Areas	226,400	191,400	85,000	0	0	87,300
<b>Road Construction/Reconstruction</b>						
Not Allowed (acres)	605,900	605,900	432,300	119,300	108,300	605,900
Allowed (acres)	0	0	173,600	486,600	497,600	0

## **Direct and Indirect Effects**

### **Effects on Inventoried Roadless Area Values From Recreation Management**

Inventoried roadless area values that could be affected from recreation management include primitive, semi-primitive non-motorized and semi-primitive motorized settings for dispersed recreation activities, clean drinking water, and habitat.

Recreation management could affect roadless areas if new facilities and new roads are built and left open for recreation access in roadless areas. Recreation management could also affect roadless area characteristics if recreation use was managed to such densities that the semi-primitive character was lost, or if recreation was improperly managed to the degree water quality was impaired.

In Alternative 1 with motorized and mechanized recreation restricted in about 360,000 acres that are recommended as wilderness, user densities could increase in the remaining inventoried roadless areas (about 246,000) however, it is unlikely densities would increase to the degree that semi-primitive settings are affected. Conversely, the primitive settings would be maintained in areas recommended as wilderness. Effects from recreation management in alternatives 2, 6, and 3 would be similar to Alternative 1. Alternatives 4 and 5 allow new recreation facilities or road construction in inventoried roadless areas that may affect primitive or semi-primitive character.



Standards and guidelines for water quality and properly managed recreation will reduce the risk of impaired water quality.

### **Effects on Wilderness Characteristics in Inventoried Roadless Areas From Recreation Management**

Recreation management could affect wilderness characteristics by detracting from a sense of solitude and altering the natural environment. By recommending large amounts as wilderness in Alternative 1, solitude and remoteness are more likely to be maintained because motorized and mechanized access would not be allowed. The risk of effects to the naturalness of the environment caused by improper off road use by vehicles is lessened. Effects on wilderness characteristics from alternatives 2, 3, and 6 could be somewhat greater than in Alternative 1, because less area is recommended as wilderness. Alternatives 4 and 5 pose the greatest risk to wilderness characteristics, because no acres are recommended as wilderness.

### **Effects on Inventoried Roadless Area Values From Timber Management**

Roadless area values that could be affected from timber management include potential effects from harvest and associated roads on primitive, semi-primitive non-motorized and semi-primitive motorized settings for dispersed recreation activities, watersheds, terrestrial and aquatic habitats and values of large undisturbed landscapes.

Alternatives 1, 2, and 6 have the least potential timber management effects on inventoried roadless area values, because the National Roadless Area Conservation Rule generally prohibits road construction or reconstruction and the cutting, sale and removal of timber, except for removal of some generally small diameter trees which would maintain or improve roadless characteristics, TES species habitat, and maintain or restore ecosystem composition and structure. Undisturbed landscapes found in inventoried roadless areas could be altered in alternatives 3, 4, and 5 to differing degrees. Tentatively suited lands within inventoried roadless areas where timber harvest would be allowed (based on prescription) include an estimated 61,000 acres in Alternative 3, 155,000 acres in Alternative 4, and 158,000 acres in Alternative 5. Timber harvest activities also increase the risk to impairing water quality and affect habitat for some species. Specific guidance in the proposed forest plan however, provides protection for water resources during timber harvest operations. Effects on these inventoried roadless area values are further discussed in the watershed and biodiversity topics.

### **Effects on Wilderness Characteristics in Inventoried Roadless Areas From Timber Management**

Timber management could affect wilderness characteristics in inventoried roadless areas by detracting from a sense of solitude during timber harvest activities and for the longer term by altering the natural environment with tree removal and road construction. Alternatives 1, 2, and 6 would have the least effects on wilderness characteristics from timber removal because the National Roadless Area Conservation Rule generally prohibits road construction and the cutting, sale and removal of timber, except for removal of generally small diameter trees which maintains or improves roadless characteristics, TES species habitat, and maintains or restores ecosystem

composition and structure. Wilderness characteristics in inventoried roadless areas have the greatest potential to be altered in alternatives 4 and 5, which allows timber harvest on 155,000 and 158,000 acres of tentatively suited inventoried roadless areas respectively. Alternative 3 allows timber harvest on about 61,000 of these acres.

### **Effects on Inventoried Roadless Areas Values From Oil and Gas Activities**

*The following description of effects refers only to the area identified as the “Appeal Settlement Zone” as described in Topic 9 – Oil and Gas. It is estimated to be 65,000 acres.*

Oil and gas activities and associated roads have potential impacts to roadless values. Oil and gas leasing varies by alternative. Refer to the description below for the differences in leasing by alternative. Depending on the location of the development, some parts of the inventoried roadless area could be fragmented and isolated, making them too small to be managed effectively for the roadless resource. The risk of affecting water sources from oil and gas activities is described in Topic 1 – Watershed Health.

### **Effects on Wilderness Characteristics in Inventoried Roadless Areas From Oil and Gas Activities**

Oil and gas activities such as exploratory drilling, oil and gas field development and other activities that involve the construction of roads, wellsites and other facilities would adversely affect the naturalness, remoteness/solitude, integrity, and other wilderness characteristics. The impacts associated with the drilling of a single exploratory well would adversely affect the characteristics associated with the roadless areas. These impacts would be of relatively limited area and of short duration and once drilling and reclamation is completed the impacts to the roadless characteristics would not be significant. However, some evidence of human activities would be present for a long period. These impacts may be of relatively high intensity and long duration if they are associated with oil and gas field development and the subsequent production of oil and gas. The impacts associated with a producing oil and gas field would be long term and significant. Vehicular traffic and human activities associated with a developed oil field would directly affect the sense of remoteness and solitude. The presents of roads, wellsites, pipelines and other facilities would be incompatible with the natural integrity. If oil and gas were discovered and production undertaken, there would be a direct loss of roadless acres for the life of development and for some time after while reclamation returns the area to a more natural setting.

The decision being made in the Forest Plan affects new leases not existing ones. In all alternatives (except Alternative 4), an area of existing leases, the Table Top Unit, could be explored and result in effects to wilderness characteristics. The degree to which the Unit is explored is affected by whether or not new leases would be issued and under what stipulations.

Though Alternative 1 does not allow new leasing in the Appeal Settlement Zone, development of existing leases within the Table Top Unit could affect the wilderness characteristics within the inventoried roadless area. These characteristics could be affected on an estimated 20 acres because of oil and gas exploration activities. Once existing leases expire, Alternative 1 provides the greatest protection to wilderness characteristics. Alternative 2 is very similar. Again,

development of existing leases within the Table Top Unit could affect the wilderness characteristics on about 20 acres. Once existing leases expire, leasing availability in areas recommended for wilderness is precluded. On remaining available acres, new leases could be issued but surface occupancy would not be allowed. No direct impacts to the wilderness characteristics within the inventoried roadless areas would occur but there may be some indirect affects to solitude and remoteness if directional drilling occurred from adjacent lands since an access road would likely be constructed to the drill site and the sounds associated with construction and drilling may be heard within the inventoried roadless area.

Alternative 3 precludes new leases in areas recommended for wilderness and does not allow surface occupancy in areas managed for undeveloped and backcountry recreation values. Additional new leases could be issued outside the areas listed above with stipulations applied to protect sensitive resources. Oil and gas activities are estimated to disturb the natural appearance on about 75 acres. Some of the development predicted from existing leases within the Table Top Unit could be within areas high in wilderness characteristics. Solitude and remoteness could be affected on a much larger scale. Some of the effects to wilderness characteristics could last 20-30 years because of field development.

Alternative 4 does not make a leasing decision. Because lessees would not be able to effectively develop a field should one be discovered due to nearby unleased parcels, future activities are not likely. Alternative 5 would provide for leasing with standard lease terms and therefore provide the greatest opportunity for full field development. Under

Alternative 5 would provide for leasing with standard lease terms and therefore provide the greatest opportunity for full field development. Wilderness characteristics could be significantly affected. Oil and gas activities are estimated to disturb the natural appearance on about 105 acres. The solitude and remoteness could be affected to a greater degree because of the sights and sounds of development beyond the actual disturbed area. Some of the effects to wilderness characteristics could last 20-30 years because of field development.

In Alternative 6 because the RACR is considered, new leases issued as a result of the leasing decision made in the plan revision would not allow surface occupancy. However, existing leases in the Table Top Unit that expire would be immediately renewed in areas not precluded by management plan direction. Leases would be renewed in areas managed for motorized dispersed recreation values and terrestrial habitat. The wilderness characteristics present in these areas would continue to be affected. Within this area the degree of effects from Alternative 6 is less than Alternative 3. In the remainder of the area the effects to wilderness characteristics would be minimal because of no surface occupancy.

Additional roadless areas included in the 1994 Leasing Decision will be protected by RACR. The one exception is if existing leases are already in place, they are considered valid existing rights and may be developed if not precluded by management plan direction.

## **Effects on Inventoried Roadless Area Values From Motorized Recreation Use**

Inventoried roadless area values include primitive, semi-primitive non-motorized and semi-primitive motorized settings for dispersed recreation activities. None of the alternatives manage motorized travel to the degree semi-primitive settings are altered so there would be no effect.

### Effects on Wilderness Characteristics in Inventoried Roadless Areas From Motorized Recreation Use

Motorized recreation use could affect wilderness characteristics by detracting from the solitude of an area. One aspect of winter motorized recreation use, heliski operations, has the potential to affect the solitude in alternatives 3, 4, 5, and 6. The solitude would be affected to varying degrees in five roadless areas along the Wasatch Front where the helicopter skiing operates under permit. Wilderness characteristics are least affected by alternatives 1 and 2 that do not provide for heliski opportunities. Snowmobiling could also affect solitude in certain inventoried roadless areas, where these opportunities are allowed by alternative.

**Table RW-7  
Acres in Inventoried Roadless Areas  
Open to Snowmobiling and Heliskiing**

	1	2	3	4	5	6
Acres Open to Snowmobiling	240,000	301,000	674,000	628,000	713,000	578,000
Percent Open to Snowmobiling	19	24	54	51	58	47
Acres of Open to Heliski	0	0	12,000	17,000	17,000	17,000

### Effects on Inventoried Roadless Area Values From Road Construction

For the 15-year period of the Forest Plan, some new road construction into roadless areas is allowed in alternatives 3, 4, and 5, that do not apply the prohibition on road construction and reconstruction as prescribed by the National Roadless Conservation Rule. No road construction and reconstruction is allowed in roadless areas in alternatives 1, 2, and 6. The one exception is from existing oil and gas leases in the High Uintas, Lakes and Little West Fork Blacks Fork Roadless Areas. Road construction in any roadless area under any alternative is expected to be limited during this planning period.

### Effects on Wilderness Characteristics From Land and Mineral Ownership

Several inventoried roadless areas have privately owned minerals. Since the federal government has no authority to deny development of those minerals, they pose a risk to wilderness characteristics in inventoried roadless areas should they ever be developed. Privately owned minerals pose the greatest risk to wilderness characteristics in recommended wilderness. Alternative 1, followed by alternatives 6 and 3 has the most acres in recommended wilderness with private minerals. Alternative 2 has only a few acres of private minerals. Alternatives 4 and 5 have none, because there is no recommended acreage. Roadless areas with wilderness recommendations that have a high percentage of their acreage with private mineral rights are

Upper South Fork, Burch Creek, Twin Peaks (Deaf Smith and Little Cottonwood portion), and Lone Peak. The High Uintas roadless area has 6,500 acres of private minerals, although this is only about 6% of its total acreage.

**Table RW-8  
Mineral Ownership in Recommended Wilderness**

Alternative	Federal Surface and Minerals	Federal Surface and Private or State Minerals
1	335,907	24,222
2	145,778	155
3	42,590	8,873
4	0	0
5	0	0
6	61,017	8,944

Surface ownership can also pose a risk to wilderness characteristics in inventoried roadless areas should they ever be developed.

There is one private inholding remaining in the Mount Olympus Wilderness and two private inholdings remaining in the Twin Peaks Wilderness. The other four wilderness areas on the Forest have no private inholdings. Alternative 1 includes the most amounts of private and state inholdings within recommended wilderness, alternative 2 has some, and other alternatives have none. Alternatives also vary by the amount of recommended wilderness adjacent to private land. Alternatives 1 and 2 have the greatest amount of miles of private land next to recommended wilderness, which may affect access and increase the potential for motorized trespass. The Upper South Fork roadless area recommended for wilderness is almost completely surrounded by private land.

**Table RW-9  
Adjacent Private Land  
Miles Next to Recommended Wilderness**

Alternative	Miles of Adjacent Private Land next to Recommended Wilderness
1	169
2	15
3	28
4	0
5	0
6	30

## Cumulative Effects

Other Forests in the state of Utah are completing forest plans or scheduled to complete them. The Uinta and Caribou National Forests are in the process of planning concurrently with the

Wasatch – Cache. The Ashley National Forest is scheduled to begin Forest Plan revision in the near future. Alternatives presented in those plans could have some recommended wilderness adjacent to the Wasatch - Cache.

Generally, much of the roadless areas recommended for wilderness in all alternatives are typical of wilderness that has already been designated both nationally and within the state of Utah and will not significantly add to the diversity of lands in the Wilderness Preservation System. An exception to this may be the Upper South Fork roadless area, which is somewhat different than much of the current higher elevation wilderness areas. Currently, large tracts of lands administered by the Bureau of Land Management in the state of Utah are being evaluated for wilderness proposals. Additions of these lands to the system could generally add more land type diversity than much of the additional National Forest roadless lands. The BLM does have adjacent Wilderness Study Areas on the north and south ends of the forest's Stansbury roadless area.

Alternatives with high amounts of recommended wilderness could significantly affect motorized recreation trends and activities on the Forest. Some of the best snowmobiling opportunities in the nation and state are on roadless areas of the Wasatch-Cache. There are also significant summer motorized travel plan trail opportunities on several roadless areas. Significant numbers of recreation users could be displaced to other lands in some alternatives. If other national forests and public land management agencies were to adopt alternatives similar, snowmobiling, motorized recreation, and dispersed car camping could be impacted.

Ultimately in all alternatives, dispersed opportunities on the forest could be exceeded and users would be displaced. Under alternatives 3, 4, and 5, it is expected that this use would be more accommodated, but some displacement would still occur.

## WILDERNESS MANAGEMENT

### Introduction

There are seven existing wilderness areas on the Wasatch – Cache National Forest totaling 309,079 acres. This represents approximately 25 percent of Wasatch – Cache National Forest Service acreage and 38 percent of all the current wilderness areas in Utah State. The wilderness areas on the Forest are Lone Peak, Twin Peaks, Mount Olympus, Deseret Peak, Wellsville Mountains, Mount Naomi, and High Uintas. Lone Peak is shared with the Uinta National Forest and the High Uintas is shared with the Ashley National Forest.

### Laws, Policy, and Direction

- **The Wilderness Act (1964)** - Established a National Wilderness Preservation System to be administered in such a manner as to leave these areas unimpaired for future use and enjoyment as wilderness.
- **The Alaska National Interest Lands Conservation Act (1980)** - Directs the Secretary of Agriculture to provide adequate access to non-federal land within the boundaries of the National Forest System including congressionally designated areas.
- **Congressional Grazing Guidelines (Sec. 108, PL 96-560, H.R. Report 96-617 dated 11/14/79)** - Clarify the Congressional intent that livestock grazing will be permitted to continue in national forest wilderness areas, when such grazing was established prior to classification of an area as Wilderness. This policy is reiterated in FSM 2323.22.
- **Endangered American Wilderness Act of 1978 (PL 95-237)**: Includes the designation of Lone Peak as a wilderness area and some watershed protection requirements for that area.
- **Utah Wilderness Act of 1984 (PL 98-428)**: Includes the designation of High Uintas, Mount Naomi, Wellsville Mountains, Mount Olympus, Twin Peaks and Deseret Peak as wilderness areas and some requirements for grazing in wilderness, state water allocation authority, prohibition on buffer zones, and mineral resources.

### Affected Environment

Lone Peak became a Wilderness in 1978 with the Endangered American Wilderness Act and the other six areas became Wilderness in 1984 with the Utah Wilderness Act of 1984.

**Table RW-10  
Wilderness by District and Acreage**

Name	District	WCNF Wilderness Acres	Total Wilderness Acres
Twin Peaks	Salt Lake	11,495	Same
Mount Olympus	Salt Lake	15,300	Same
Lone Peak	Salt Lake	9,747	30,578
Deseret Peak	Salt Lake	25,215	Same
Mount Naomi	Logan	44,523	Same
Wellsville Mountains	Logan	22,986	Same
High Uintas	Kamas, Evanston, Mt View	179,813	453,664

The long-term goal is to maintain wilderness, where ecosystems are primarily influenced by the forces of nature, provide a diversity of opportunities for public use, enjoyment and understanding of wilderness, and preserve a high quality wilderness resource for present and future generations. The Wilderness Act of 1964 emphasizes the protection of pristine areas and recognized recreational values of public benefit. Wilderness provides outstanding opportunities for solitude and for primitive and unconfined recreational experiences. Since the Wilderness Act became law in 1964, millions of people have visited designated Wilderness for solitude, recreation, spiritual enhancement, and natural appreciation. Recreation is just one way that wilderness resources are used and valued. Wilderness is important as a sanctuary for undisturbed ecosystems, for maintenance of species diversity, protection of threatened and endangered species, as well as non-endangered plants and animals, protection of watersheds and clean water, protection of airsheds and clean air, scientific research, and various social values. Wilderness is a benchmark for determining our nations environmental and spiritual health. Local communities receive some economic benefits from wilderness designation through tourism and recreation.

The act defines the statutory definition of wilderness as:

“A Wilderness, in contrast with those areas where man and his 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 Act, an area of undeveloped federal land retaining its primeval character and influence, without permanent improvements of human habitation, which is protected and managed so as to preserve its natural conditions and which:

1. Generally appear to have been effected 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 5,000 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 features of scientific, educational, or historic value.”



Wilderness designation allows uses specified in the 1964 Wilderness Act and the exceptions directed by the Utah Wilderness Act of 1984.

Wilderness acreage varies in the seven management areas on the Forest. The Eastern Uintas followed by the Stansbury and Central Wasatch management areas have the highest percentage of wilderness acreage, while the North Wasatch – Ogden Valley and Bear management areas have the no wilderness acreage.

**Table RW-11  
Existing Wilderness Acreage and Percentage**

<b>Management Area</b>	<b>Acreage of Existing Wilderness</b>	<b>Percent of Management Area designated Wilderness</b>
Central Wasatch	36,542	37
North Wasatch – Ogden Valley	0	0
Stansbury	25,214	37
Cache – Box Elder	67,509	23
Bear	0	0
Western Uintas	42,846	15
Eastern Uintas	134,966	44

Wilderness areas on the Forest include:

***Mount Naomi***

Located on the Logan Ranger District and part of the Cache – Box Elder management area with elevations up to 9,980 feet on Naomi Peak. Use is a collection of day visitors, backpackers and horseback riders, while the winter receives cross-country ski and snowshoe users. Key access is off the Logan Canyon Highway, along the Logan front and reaching the high country is popular from the Tony Grove Lake area. Included in the area is the Mount Naomi Peak National Recreation Trail. Use varies from low to high, depending on location and season. The area has important wildlife and ecosystem values.

***Wellsville Mountains***

Located on the Logan Ranger District and part of the Cache – Box Elder management area with elevations up to 9,372 feet on Box Elder Peak. Almost all of the Wellsville Mountains are part of the wilderness, but the trail system and access is limited. The area is known also for its raptor migrations. Use varies, but is generally on the lower side.

***High Uintas***

Located on the Kamas, Evanston and Mountain View Districts, but much of it is on the Ashley National Forest, who shares in management of the area (Wasatch-Cache has

179,813 acres of 453,664 total acres). The High Uintas is on both the Western and Eastern management areas. It is the largest wilderness area in the state with elevations up to 13,528 feet on Kings Peak, the highest mountain in the state. Terrain varies from vast lodgepole forests, to river canyons to high alpine meadow and rock country. Use varies from low to high depending on location and season, but the area is extremely popular and well known throughout the state and nation. The High Uintas attracts a high volume of backpackers and horseback riders. Hiking is popular from access off of Mirror Lake Highway and the Forest Service North Slope road. The area is popular for visits by groups and organizations such as Boy Scouts, church groups and hiking clubs. Winter access is somewhat limited, but the winter recreation visitation is increasing. The High Uintas is known for its outstanding scenery, ecosystem and wildlife values. The High Uintas Wilderness area has a management plan for the area completed in 1997.

### *Deseret Peak*

Located on the Salt Lake District and on the Stansbury management area in the Stansbury Mountains near the Tooele area. It is a desert mountain island in the Great Basin with elevations up to 11,031 feet on Deseret Peak. Use in the past has been low, but is now increasing because of growth in the Tooele area and crowded conditions in the Wasatch Front wilderness areas. Use is a combination of day hikers and backpackers with some horseback riding. The area is also known for its ecosystem and wildlife values.

### *Mount Olympus, Twin Peaks, and Lone Peak*

These three wilderness areas are located on the Salt Lake Ranger District and on the Central Wasatch management area adjacent to the Salt Lake metropolitan area. Lone Peak is also located on the Uinta National Forest, that shares in its management (Wasatch-Cache has 9,747 acres of 30,578 total acres. Use is extremely high all yearlong, including the winter. Some solitude can be found in the off-trail and more rugged sections. These Wasatch front wilderness areas are somewhat unique as wilderness, in that 90 percent plus of their use is from day visitors to the area. Backpacking opportunities are somewhat limited. Horseback riding and dogs are limited to the Mill Creek side of Mount Olympus, because of important watershed values. Access is very easy with a lot of trailheads and access points from Mill Creek Canyon, Little Cottonwood Canyon, Big Cottonwood Canyon and along the Wasatch front. Elevation high points are 10,246 feet Gobblers Knob (Mount Olympus), 11,330 foot Twin Peak (Twin Peaks), and 11,326 foot Little Matterhorn Peak (Lone Peak). The area offers critical wildlife habitat, because of its adjacency to urban development. These areas are critical watershed for the Salt Lake area.

## **Biological Diversity of Wilderness**

**Air quality** – Wilderness areas on the Wasatch-Cache are rated as Class II areas. Visibility in long distance views is often a problem in the Wasatch front wilderness areas, because of their adjacency next to the Salt Lake metropolitan area.

**Water Quality** – Wilderness areas on the Wasatch-Cache are important critical watersheds for communities and wildlife needs. Most of the three Wasatch front wilderness areas are watersheds for Salt Lake City, while other wilderness areas are important watersheds for other local communities.

**Vegetation** – Much of the wilderness acreage on the Forest is higher elevation, but it can vary from around 5,000 feet to over 13,000 feet thus supporting a diversity of vegetation types including grass/forbs, brush types, conifer, aspen and alpine.

**Livestock Grazing** – There is no grazing in the three Wasatch front wilderness areas (Mount Olympus, Twin Peaks and Lone Peak). The other four wilderness areas (Mount Naomi, Wellsville Mountains, Deseret Peak, High Uintas) have some cattle and sheep allotments. Some of the allotments in the High Uintas Wilderness are vacant or closed.

**Table RW-12  
Grazing Allotments in Wilderness Areas**

Wilderness	Number of Allotments
High Uintas	19
Mount Naomi	3
Wellsville Mountains	3
Deseret Peak	5

**Wildlife and Fisheries** – The wilderness areas provide relatively undisturbed habitats for wildlife including several species at risk. Much of the area is summer range, but the lower slopes offer some critical remaining winter range. Big game includes deer, elk, and moose. Mountain Goats have been introduced. Bighorn sheep inhabit the Hole-in-Rock/Hoop Lake area near the High Uintas. Predators include coyote, bobcat, cougar, and black bear. Many non-game, small game and bird species utilize and live in wilderness areas, as well as reptiles and amphibians. Hunting and fishing opportunities, as well as wildlife watching are popular in wilderness areas. Native trout exist in wilderness. The Utah Division of Wildlife Resources has historically stocked many lakes and streams with trout. Possibly some wilderness areas could offer potential habitat for rare species including large predators.

**Fire** – Within the wilderness areas in the past, primary management action for fires has been suppression, which has led to vegetation conditions that differ from those resulting from natural processes. It is now recognized that fire benefits ecological and habitat values. Fuel buildups are high in many areas, increasing the potential of severe fires next to developed areas and creating suppression needs to protect private property and watershed values. Currently, only the High Uintas and Lone Peak Wilderness areas have a fire management plan. For Lone Peak, prescribed burns are not allowed by the current Forest plan on the Wasatch-Cache side. The goal of wildland fire use in wilderness is to allow natural disturbances to play their natural role in the ecosystem cycles within the wilderness.

**Insects and Disease** – Snags and stands of dead trees remain from various insects and disease epidemic attacks in the past. These have included mountain pine beetles in the lodgepole stands

in the High Uintas and mistletoe and outbreaks in small stands along the Wasatch Front wilderness areas. Because natural processes are allowed to function in wilderness, no management actions are underway or planned.

**Undesired Species** – Noxious weeds in wilderness areas including Dyers woad, leafy spurge, and Canada thistle is an increasing problem and starting to spread to new areas. The Mount Naomi Wilderness area especially has had noxious weed invasions. Certified weed-free feed is required in national forest to prevent additional infestations from stock feed.

## **Recreation Use in Wilderness Areas**

Recreation use in wilderness is increasing and can affect wilderness values and resources, naturalness, wildness, and solitude. Without proper management, the quality and values of wilderness are jeopardized.

A primary concern is the growing increased use of wilderness visitors impacting both popular sites, as well as pristine areas. One tool to help manage this is the use of opportunity classes based on limits of acceptable change. Currently, only the High Uintas Wilderness has approved opportunity classes. For the High Uintas Wilderness area approximately 33% of the area is Class I, 58% is Class II, and 9% is Class III. Other wilderness areas will have Class I, II, and III areas designated in this plan revision.

Wilderness visitation use is considered high on the Wasatch-Cache, except for perhaps the Deseret Peak and Wellsville Mountain areas, that have lower use. Popular trails and destinations are often crowded with demand for wilderness often exceeding supply. High use is especially occurring in areas such as:

- Near urban areas, such as the three Wasatch front wilderness areas.
- Trail corridors convenient for day hikes
- Lake basins
- Destination areas and trails to high peaks (example Kings Peak in High Uintas, Highline Trail, Mount Naomi Peak National Recreation Trail).
- Easy access areas – paved or graded gravel roads, trailheads with ample parking.

Types of recreation use vary by wilderness area, terrain, season and access. The trend is for continued increased use, especially in wilderness areas located near urban areas. Day hiking dominates the three Wasatch front wilderness areas. The highest backpacking and horse use is in the High Uintas Wilderness. Many areas receive high recreation use all year long. Much of the current management emphasis is to manage areas of heavy impact, try to confine use to these corridors and areas and to protect the more pristine wilderness values.

Commercial services can be performed within approved wilderness areas to support activities essential to realizing the recreational and other values of the area (Wilderness Act of 1964). Commercial outfitting and guiding services currently in wilderness are conducted only in the High Uintas Wilderness area with one outfitter out of the Mountain View District.

Currently, none of the wilderness areas have a required visitor use permit system or designated camp areas. There are recommended campsites in some areas. Permit systems may eventually be a part of future wilderness management.

Motorized equipment can be authorized on a case-by-case basis in wilderness, where there is a legitimate emergency involving human health and safety, such as a rescue mission for injured or lost people or for critical fire suppression needs. Other exceptions in the Utah Wilderness Act of 1984 allow access to service sanitation facilities, access to municipal water developments, and access to meteorological facilities.

There are some problems of motorized recreation trespass into the wilderness, such as snowmobiles in the High Uintas, Mount Naomi, and Wellsville Mountain areas and OHV summer season trespass in Deseret Peak area. Mountain bike use (classified as mechanical use not allowed by the 1964 Wilderness Act) is a trespass problem in some wilderness areas. Although it is an escalating problem, the trespass in wilderness from motorized and mechanical use generally is from a limited number of users.

### **Special Designations in Wilderness**

There are no designated Wild and Scenic Rivers on the Forest, but there are eligible segments of rivers in the Wild and Scenic River inventory for the Forest within wilderness. Suitability analysis for these segments is not being conducted as a part of Forest plan revision. There are no registered National Historic sites within wilderness, but there are some sites that are eligible for the National Register of Historic Places. The Mount Naomi Wilderness has the Mount Naomi Peak National Recreation Trail.

### **Future Trends**

There continues to be public interest in adding land to the National Wilderness Preservation System, either as additions to existing wilderness or as new wilderness areas. If lands are added to the system, they will satisfy both a need for preserving natural ecological conditions and for public recreation in primitive and pristine environments.

There is also opposition to adding to the wilderness system, with views that these areas are needed for access, motorized recreation needs such as snowmobiling and motorized recreation, and for future commodity outputs that benefit local community economies.

Regardless of the acreage of wilderness, use in these areas will continue to increase as a result of population growth, the desire to visit areas with pristine values, and the popularity of outdoor recreation. New technologies are continuing to be developed, that may alter the primitive recreation experience. For example cellular phones and GPS units are changing the sense of challenge, adventure, and solitude. Given the reliance on these devices and urbanization of the population, primitive skills of some visitors could diminish.

The availability of lands outside wilderness that are capable of providing high quality, primitive, wild land recreation experiences has decreased over time. If use in the most pristine portions of

wilderness areas increases, these unique parts of wilderness, that offer outstanding opportunities for solitude and are virtually unaffected by use, are at risk. Low use pristine locations are highly vulnerable to being adversely impacted by even small increases in use.

Management of wilderness areas is changing. More areas are incorporating permit systems, designated sites and use restrictions. Another management tool is that of the minimum tool concept, where wilderness managers scrutinize planned actions to determine if they are necessary to protect wilderness resources or experiences. If the action is deemed necessary, then it must be accomplished with the least impact on wilderness values.

Finally, we are seeing a shift in the view of wilderness values. For a long time, wildernesses were looked at primarily as areas to meet primitive recreation needs, however they are now being recognized as critical areas for ecosystem, wildlife and watershed values, as well as for education and research.

In August of 2000, The Forest Service finalized the National Wilderness Agenda known as “Thinking Like a Mountain”. The purpose of the Wilderness Agenda is to provide a platform for communicating the values of wilderness and to focus energies on effective implementation strategies that will maintain and manage these limited resources. The Forest Service vision for wilderness areas is that wilderness is protected, nurtured, and sustained by increasingly competent and committed managers, supported by expanded scientific knowledge and growing political strength from a public that increasingly understands and appreciates wilderness.

In the Forest Service’s Wilderness Recreation Strategy, two primary problems were identified: 1) Many users are critical of use limits based on social standards alone, in high destination areas, and 2) When use limits are implemented in high use areas, visitors are displaced to the more pristine and sensitive areas that have received low use in the past. Selected courses of actions to respond to these problems included: 1) Create and/or market opportunities for high quality wildland recreation experiences outside wilderness and off National Forest lands; 2) Make it a priority to commit resources and protection to low use wilderness lands to ensure non-degradation of their outstanding opportunities for solitude and near pristine conditions; and 3) Manage high use destinations as sources of inspiration and connection with wilderness, develop and implement social standards with public input, and implement management actions to ensure that impacts to physical and biological resources are contained within standards established in the Forest plan.

## **Environmental Consequences**

### **General Effects**

Human use of designated wilderness is governed by the terms in the Wilderness Act. This limits management activities within the wilderness. Wilderness is managed to limit human impacts and influences to desired levels. Project proposals within these areas are evaluated for compliance with wilderness values. Commercial uses of wilderness are controlled by special use permits and associated operation plans. Because direction for wilderness is detailed in law, regulation,

agency policy and in specific management plans, wilderness management for existing wilderness will vary little by alternative.

### Effects on wilderness from Wild and Scenic Rivers

The proposed forest plan provides standards to protect the essentially free-flowing character and outstandingly remarkable values of all eligible segments. These standards apply for the length of the segment and for .25 miles from the banks on both sides of the segment. Rivers found eligible within wilderness areas would be protected as wild rivers. Approximately 81 of the 88 miles of eligible wild and scenic river segments in wilderness are in the High Uintas Wilderness. Current wilderness areas have the following eligible wild and scenic river segments:

**Table RW-13. Wild and Scenic River Eligible Segments in Wilderness Areas**

Wilderness Area	Wild and Scenic River Eligible Segments	Miles
High Uintas	Henrys Fork	8.0
High Uintas	Thompson Creek	3.7
High Uintas	West Fork Beaver	4.6
High Uintas	East Fork Blacks Fork	15.4
High Uintas	East Fork Smiths Fork	11.0
High Uintas	LH & RH Fork Bear River	9.4
High Uintas	Middle Fork Beaver Creek	6.9
High Uintas	Ostler Fork	3.7
High Uintas	Stillwater Fork	6.1
High Uintas	West Fork Blacks Fork	8.1
High Uintas	West Fork Smiths Fork	3.8
Mount Naomi	High Creek	5.7
Lone Peak	Little Cottonwood (boundary)	1.1

Wild and Scenic River management is compatible with wilderness and would have no effect on wilderness.

### Effects on wilderness from vegetation and fire management

Management activities in wilderness are limited. In fact, the forces of nature (fire, insects, and disease) should be allowed to play a natural role in wilderness without intervention, as long as they do not threaten resources, public safety, and properties outside the wilderness boundary. Present conditions reflect years of fire suppression, but vary depending upon location. One of the most significant impacts to wilderness has been the suppression of fire. The exclusion of fire has produced vegetative conditions that are outside of the historical range of variability. Two vegetation management tools available inside wilderness are wildland fire use and prescribed fire. To help improve ecosystem health and meet the intent of the Wilderness Act, the proposed Forest Plan provides direction for wildland fire use within designated wilderness. This direction would apply to alternatives 1, 2, 3, 5, and 6. Since Alternative 4 is the 1985 Plan as amended, use of wildland fire would not be allowed except where fire management plans are in place (High Uintas and Lone Peak Wilderness areas). Prescribed fire would be allowed only to meet wilderness objectives in alternatives 2, 3, 5, and 6.

Potential direct effects of wildland fire and prescribed fire could include a temporary loss of vegetation, reduction in water quality due to sedimentation, loss of cultural resources, temporary loss of grazing opportunities, smoke pollution, and a perceived loss in scenic quality. Indirect effects of fire use may include a temporary loss of wildlife habitat for some species, or additional habitat for others. Fires burning in wilderness could change use patterns and cause inconvenience for visitors. Wilderness users could expect temporary access restrictions during periods of fire use activities. Recreational use of burned-over areas may drop for a period of years, until vegetative recovery achieves a more advanced stage. Lethal fire in heavy timber stands could increase long-term trail maintenance needs from continued downfall of snags across trails.

Timber harvest is not permitted within wilderness areas, but logging activities near wilderness boundaries have the potential to create short-term noise level increases that change the user's perception of being in a remote area. Vegetation management activities near the wilderness boundary have the potential to affect wilderness use levels by creating potential motorized trespass entry points and increasing the potential for ecosystem effects such as noxious weed introductions. Additional access as a result of vegetation management activities may result in increased non-motorized recreation use. Alternatives 2, 3, 4, 5 and 6 allow timber harvesting. It is possible some timber harvests could be located near wilderness boundaries. Mechanical treatments in oakbrush could also have some short-term effects near wilderness boundaries on the Wasatch front.

### **Effects on wilderness from roads management**

Construction and reconstruction of roads near wilderness boundaries can potentially affect wilderness resources by increasing access. Road building activities near wilderness boundaries have the potential, in some types of terrain and vegetative cover, to increase inappropriate wilderness use by creating potential motorized entry points. In the short term, increased noise levels change the user's perception of being in a remote area. Improved access could also result in increased recreation use.

Due to Roadless Area Conservation Rule being applied in alternatives 1, 2, and 6, the potential for effects resulting from road construction would lowest in these alternatives.

### **Effects on wilderness from wildlife and fisheries management**

The Utah Division of Wildlife Resources through state game management regulations accomplishes much of the general management of wildlife including hunting seasons and fish stocking of lakes. The Forest Service manual (FSM 2641) provides that the state has the responsibility to make determinations about which wildlife and fish species are native or indigenous. The Forest Service has the responsibility to prevent damage to resources occurring on National Forest system lands. Monitoring of range conditions, management indicators and species at risk will help in meeting that responsibility.

It is recognized that fish stocking can cause human use around lakes and that stocking can interfere with historic aquatic natural processes. Holden (et al 1996) recognized that impacts to historic aquatic natural processes have occurred due to stocking fish in previously fishless



waters. Historic aquatic natural processes (prior to human induced change) in currently or historically stocked waters, will be difficult, if not impossible, to fully restore. It is likely that if stocking is precluded, amphibians will migrate back into lakes, macroinvertebrate communities are likely to recolonize, but zooplankton and other invertebrate species may not. However, zooplankton and other invertebrates can be reintroduced with human intervention.

Wilderness fishing recreation use is high in some areas causing increased use and associated impacts in popular lake basins.

### **Effects on wilderness from recreation management**

Use in existing wilderness is expected to increase regardless of alternative. Corresponding increases in recreation-associated impacts to wilderness resources can also be expected. Additional areas recommended as wilderness could redistribute some of this use. In some cases the use in relatively undisturbed areas could increase as a result of wilderness designation. Alternatives 1 and 2 have the most opportunity for additional areas to provide wilderness experiences.

Wilderness education will be emphasized in all alternatives in an effort to protect wilderness values. The emphasis of each alternative may affect the amount of budget available for the wilderness education program. In all alternatives information and education, management, and regulation enforcement are expected to protect wilderness values. Additional management could include strategies such as permit systems, group size limits, camping restrictions, and designated campsites.

### **Effects on wilderness from livestock grazing**

Grazing would continue in wilderness in accordance with Congressional guidelines and management direction in the proposed forest plan. Improvement of conditions identified as not meeting objectives varies by alternative and would affect wilderness as described in the section on effects on vegetation from grazing management (Topic 2). Because the Wilderness Act of 1964 permits grazing within wilderness, disposition of vacant allotments by alternative is based on other resource needs, not on wilderness considerations.

### **Effects on wilderness from mineral and energy exploration/development**

Designated wilderness is withdrawn from energy leasing and mineral entry, subject to existing rights. Private minerals within wilderness could be developed. There would be no difference between the alternatives in effects from mineral or energy exploration or development on designated wilderness areas.

### **Effects on wilderness from land ownership**

Generally landownership adjustments within designated wilderness are made in order to acquire private and state inholdings. These are usually done to protect or maintain wilderness values

from the threat of development resulting in long-term benefits for wilderness resources. There would be no difference between alternatives in effects on wilderness areas.

## **Cumulative Effects**

Wilderness values and uses both increase as population and development of private lands continues. The last legislation to designate wilderness in the state of Utah was in 1984 just prior to completion of the 1985 Forest Plan. Wilderness designation is and has been an issue of high interest in the state. Large areas of potential wilderness occur on lands managed by the Bureau of Land Management in Utah. These areas have recently undergone an inventory update adding substantial acreages to wilderness study areas. However numerous attempts to reach compromise on legislation for wilderness designation have been made without success. The future of wilderness for these lands in the state of Utah is an unknown and until they are decided, national forest wildernesses are the primary contributors to the National Wilderness Preservation System for this region.

The degree to which fire can be successfully returned to fire-dependent ecosystems within and adjacent to wilderness is a major factor in the long-term benefits of these areas as sources of intact properly functioning ecosystems. This varies by wilderness area because historic fire regimes vary with vegetation cover types. Management of wildlife and fish populations and control of noxious weed invasions both within wilderness and on adjacent lands, are other important contributors to the broad functioning of wilderness ecosystems. Finally, management of livestock grazing and recreation use to maintain wilderness values will affect the long-term role that wildernesses can play in contributing to biodiversity and sustainability of the larger systems of which they are a part. These factors do not vary significantly by alternative specifically for areas designated as wilderness, therefore cumulative effects to wilderness would be similar for all alternatives.