

Topic 3 – Roads Access Management

Introduction

Transportation facilities are essential in providing access to and through the Forest. They provide access for administration and for Forest visitors for recreation, driving for pleasure, hunting and fishing and economical livelihood use. Most of the transportation system is in place and generally appears to be serving the Forest well. The Forest Plan will provide a framework for an efficient and environmentally sensitive system for future Forest needs.

This topic addresses the general conditions of roads and current access to the Forest. It is closely related to Topic 4 – Recreation. Further information about recreation-related travel can be found there.

Laws, Policy, and Direction

- The **National Forest System Road Management and Transportation System; Final Rule and Policy**, approved January 12, 2001, provides direction for a road system that is safe, responsive to public needs, environmentally sound, and affordable and efficient to manage. The purpose is to help ensure that additions to the National Forest System network of roads are those deemed essential for resource management and use; that construction, reconstruction, and maintenance of roads minimize adverse environmental impact; and that unneeded roads are decommissioned and restored.
- The **Roadless Area Conservation Rule**. January 12, 2001, prohibits road construction and reconstruction in inventoried roadless areas on National Forest System lands, unless certain exceptions are met.
- **36 CFR Part 212**. Administration of the Forest Transportation System.
- **Forest Service Manual (FSM) 7700**. Transportation Systems.
- **Forest Service Handbook (FSH) 7709**. Transportation and Related Activities.
- **Roads Analysis: Informing Decisions About Managing the National Forest Transportation System** (USDA Forest Service 1999), is an integrated ecological, social and economic approach to transportation planning based on science that provides a process to analyze existing and future road needs and management.

Affected Environment

Travel Management

Travel management is the integrated planning of and providing for the movement of people and products to and through Forest lands. A travel management plan provides clear, specific direction on the appropriate levels of access to the Forest to be made available and the forms of transportation this access will take.

Travel management planning is critical for the management of Forest infrastructure and public access needs. At one time, many roads on the Forest were constructed for commodity needs such as timber production, mining and special use access, and range management. Although access is still needed for these purposes, access for recreational purposes are now the highest use of roads.

Traditional forms of recreation travel, such as driving for pleasure, hiking and horseback riding are showing steady increases. The popularity of mountain biking, snowmobiling, all-terrain vehicles and cross-country skiing have grown as well as other newer forms of travel such as hang-gliding, skateboards, trail skates, and dog sleds. Lakes and reservoirs receive a variety of uses such as motorboats, canoes, personal watercraft, and wind surfers.

The current Forest plan directs the development of travel plans to manage off-road vehicle use to protect resource values and to resolve recreation conflicts. Project level travel management planning can also be used to reduce undesirable road density levels. Travel management is an ongoing process that goes beyond the Forest planning stage. As travel management plans are amended, site-specific direction will be needed in some areas.

Travel management addresses more than the simple opening and closing of roads and areas to motorized use. A number of complex travel and access issues are involved in travel management:

- Recreation uses and impacts
- Legal public access to Forest lands
- Legal public access to private inholdings
- Closed versus open policy
- Economics of transporting commodities
- Law enforcement
- Public health and safety
- Travelway maintenance costs
- Effects and impacts on other Forest resources

Each District on the Wasatch-Cache has an approved current travel management plan. Travel plans are updated periodically by the Districts and involve public input, an Environmental Assessment, and an appealable decision. Routes and areas that are designated open to different types of vehicles (OHV, ATV, snowmobile, motorcycle) vary by location and season and are listed on the district travel plans. Revised travel plans will show specific areas open to snowmobiles and routes open to mechanical use (i.e. mountain bikes). The status of these vary by District:

- Salt Lake – 1997 (mainly includes allowed motorized trail use)
- Kamas – 1995
- Evanston/Mountain View – 1988 (currently being revised)
- Ogden – 1991 (updated in 1997 for minor changes)
- Logan – 1991 (updated in 1997 for minor changes)

Recreation-related travel on the WCNF has increased in volume and will continue to do so. They are affected by technological advances; economic conditions; changing demands for recreational experiences, population increases and other social influences. Worthy of note is the rapid increase in use of mountain bikes and OHV's. Growth has increased in sections of the Forest located near urban populations.

Recreation-related travel stands out as a significant issue. Recreational conflicts occur on the Forest because of increased use on the Forest and different needs of users. Areas that were once used by only a few users of one type, now face crowded conditions with several different types of users present. A key concern is the perceived incompatibility of various modes of travel. Non-motorized recreationists view their experience to be degraded by the presence of motor vehicles. They are finding it more difficult to find areas outside of wilderness that are free of motorized use.

Mountain biking has increased at a fast rate and current travel management has few restrictions on mountain biking, except in wilderness and research natural areas. Complaints about bikes from hikers and horseback riders have increased. At the same time, bicyclists would like to see more trails specifically designed and managed for mountain biking.

Motorized recreation users express frustrations on more limited areas to use and greater restrictions and regulations. They feel there is more than ample opportunity for non-motorized users with land already designated wilderness or non-motorized and are concerned that future management could further reduce motorized access. Some recreationists have expressed a desire for uses to be separated or at least to have some areas designated in which other uses are not permitted.

In the future, there will be increased use from other user groups such as senior citizens, minorities, and the physically challenged. These other visitors may have different recreation and access needs.

The increased urbanization of lands adjacent to the Forest has led to the closing or impairment of several traditional access routes. This is especially true for routes near areas like the urbanized Wasatch Front.

Evident resource damage attests to unauthorized off-road travel by motorized vehicles in some areas. These violations occur yearlong, but peak during the fall hunting season. Resource damage is especially critical if it occurs in watersheds, highly erosive soil, and key wildlife areas. There are trespass problems by motorized vehicles in wilderness areas, including snowmobiles during the winter. Vandalism and destruction of signs and barricades meant to enforce travel plans is a problem in some areas of the Forest.

Roads Management

A road is a motor vehicle route more than 50 inches wide, unless designated and managed as a trail. There has been a steady increase in road miles in the Forest Service since the 1940's. Some of that increase is due to better inventorying and classifying of existing roads. Many of the

roads were constructed to support timber harvest activities, as well as other commodity uses (mining, grazing, special uses). Today, recreation is the largest single use of National Forest System roads, accounting for the majority of the use on them.

Roads can have both beneficial and negative effects. Roads provide access for multiple uses, access to private lands, and firebreaks, and if properly constructed can mitigate negative effects of past roading. They can have undesired effects on hydrology, sedimentation, source of human-caused fires, habitat fragmentation, predation, road kill, invasion by exotic species, dispersal of pathogen, some recreational experiences, water quality and chemical contamination, soil productivity and biodiversity (Forest Service Roadless Area Conservation FEIS, 2000).

Roads management is an important aspect of Forest management on the Wasatch-Cache NF. Most of the administrative, commercial and public travel on the Forest occurs on roads. The Forest transportation system contains about 1,500 miles of forest roads under Forest Service jurisdiction that provide access to and through National Forest System lands. These include two-track roads that are planned for closure. Roads that are under municipal, county, and state jurisdiction or private roads that provide access to the Forest complete the transportation network. Forest roads are authorized primarily for the administration, protection, and utilization of National Forest lands. Through travel management planning, public access opportunities on roads are provided, along with the controls and restrictions necessary to achieve specific land management objectives and direction.

The extent of the road system varies by management area. The Western Uintas, Eastern Uintas, and Cache-Box Elder management areas have the largest mileage of District travel plan roads, while the Central Wasatch Management Area has the fewest travel plan road miles. Management areas that are smaller in size and have a high amount of wilderness and roadless acreage tend to have fewer roads.

Table RM-1. Management areas and their associated size and miles of road found within the area.

Management Area	Size (acres)	Total Forest Service Road (miles ⁽¹⁾)	Private Roads (miles)	County Roads (miles)	State Roads (miles)	Other Federal Roads (miles)
Bear	52,251	115				
Cache – Box Elder	288,173	307				
Central Wasatch	97,543	92				
Eastern Uintas	306,167	370				
North Wasatch – Ogden Valley	142,193	162				
Stansbury	68,931	42				
Western Uintas	280,670	419				
Forest-wide ⁽²⁾		1506	25	20	84	37

⁽¹⁾ This does not include the Federal, State or County roads which may be found in the Management area.

⁽²⁾ Forest-wide miles of road do not include Forest Service access roads located outside of the management areas.

A road might be classified, unclassified, or temporary. Classified roads are those needed for motor vehicle access, authorized by the Forest Service, and intended for long-term use. They include state, county, private, and National Forest system roads. Temporary roads are authorized by contract, permit, lease or emergency operation, not intended to be part of the NFS transportation system and not necessary for long term resource management. Unclassified roads are unplanned roads, abandoned travel ways and off-road vehicle tracks, which have not been designated and managed as a trail. In the past, these unclassified roads were termed “temporary”, “pioneer”, “ghost”, “ways”, and “two-track” roads. Several of these roads were added to the Forest inventory in 1993 to assist in road management and so their future decommissioning could be carried out in a planned manner. With insufficient budgets enforcement, decommissioning, and restoration of these roads has been limited.

Road Management Objectives

Road Management Objectives (RMO) are established for all classified roads and provide criteria for design, operation and management of the road. Design standards such as number of lanes, lane width, surface type, vehicle types, expected traffic volumes dictate management standards including functional class, traffic service levels and maintenance level. Access needs, environmental constraints, and economics are considered when determining the appropriate standards to be applied.

Functional Class. Forest roads provide access in a branching system of arterial, collector, and local roads. Arterials provide access to large land areas, typically by linking to county roads, state highways, or communities. They have the highest standards for construction and maintenance, because of a larger volume of traffic they carry. Collector roads disperse traffic from arterials to large forest areas, such as watersheds. Local roads used to access specific project areas or sites are usually short roads of a lower standard of construction.

Table RM-2. Miles of Road by Function Class

Functional Class	Miles
Arterial	21
Collector	243
Local	1,341

Source: Forest Service INFRA Database.

Traffic Service Levels. Traffic service levels represent the significant traffic characteristics and operating conditions for a road: Level A (most efficient and free-flowing) through D (single purpose, low volume).

Table RM-3. Miles of Road by Traffic Service Level

Traffic Service Level	Miles
A	19
B	150
C	923
D	511

Source: Forest Service INFRA Database

Surface Type. The surface type of the road represents the material placed on the road template, which the vehicle tires are in contact with. Different surface types are utilized to provide an efficient transportation system in terms of use, maintenance level, traffic service level and maintenance costs. Table RM-4 shows miles of road by surface type.

Table RM-4. Miles of Road by Surface Type

Surface Type	Miles of Road
Asphalt	55
Bituminous Surface Treated	16
Crushed Aggregate or Gravel	143
Improved Native Material	226
Native Material	1,165

Maintenance Levels. Road maintenance levels prescribe the upkeep and restoration work necessary to retain a desired service level. Maintenance levels are divided into operational maintenance levels and objective maintenance level. Operational ML describes the existing condition of the road in terms of current maintenance activities. Objective ML prescribe the upkeep and restoration work necessary to retain a desired service level. Level 1 maintenance is the lowest standard and is used to close roads from motor vehicle traffic, while preserving the investment in the road structure. Level 2 through 5 are maintenance levels for roads open to full-sized motor vehicle traffic. Level 2 is used for high-clearance vehicles, such as trucks and four-wheel drive vehicles. User comfort improves as the maintenance level increases up to level 5, which is a road with a paved smooth surface.

Table RM-5. Miles of Road by Operational and Objective Maintenance Level

Maintenance Level	Objective (Miles)	Operational (Miles)
1	27	75
2	903	1069
3	499	368
4	74	39
5	102	54

Source: Forest Service INFRA Database

Road Maintenance and Decommissioning

As a result of road maintenance budgets not keeping up with inflation and road deterioration, the condition of many roads on the Forest has fallen below the levels necessary for resource protection and to efficiently support the traffic volumes being carried. Commercial user contributions, because of fewer activities like timber sales, have decreased in recent years. Several county roads that provide access to the Forest are substandard. County governments continue to provide maintenance on some Forest roads, but at reduced levels. Trends indicate that increased volumes in the future; especially from recreation-oriented traffic will continue.

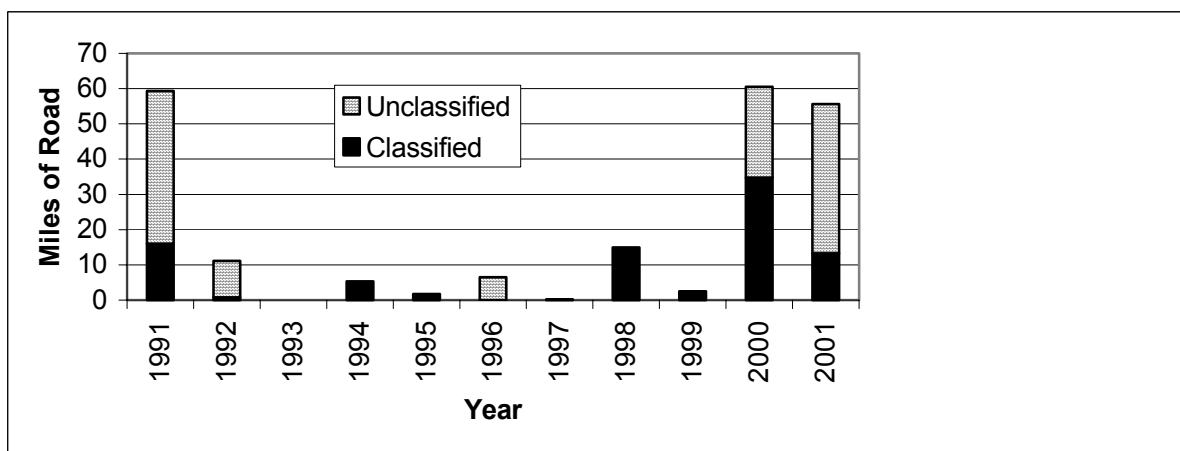
With road maintenance budgets not keeping pace with inflation and road deterioration and traffic volumes on the Forest road system dramatically increasing, many roads have not been maintained to the levels prescribed in management objectives. Maintenance on roads is

expensive, with new roads costing, on average, approximately \$1,500 per mile annually. In FY 2000, the Forest Service received about 30% of the estimated funding needed to maintain its existing road infrastructure. Annual accomplishment reporting indicates that the Wasatch-Cache road maintenance program has achieved maintenance on approximately 23% of the transportation system. This means that a large number of miles of road are in a deteriorating condition and are causing resource damage, especially because of erosion control problems. Many are rutted and rough and barely usable. Road maintenance activities have been mainly focused on stabilizing and removing public safety hazards on Forest roads.

To address the declining ability of the Forest to provide adequate maintenance and restoration work, physical closures to motor vehicles (Maintenance Level 1) and road obliteration have been employed to an increasing degree. There has not been adequate funding to decommission unclassified roads at more than a few miles per year. Decommissioning a road usually includes stabilization, restoration or conversion of an existing roadbed to a more natural state. A number of these unclassified roads are user created roads. Reporting of roads decommissioned started in 1991 and since then an average of 20 miles of road per year have been obliterated. This includes 90 miles of classified FSRs and 128 miles of unclassified roads on the Forest. Figure 1 shows miles of classified and unclassified roads decommissioned per year since 1991 as reported in annual accomplishment reports. The cost to decommission a road varies greatly by the standard and location of the road as well as the level of needed treatments. Cost estimates should be based on a case-by-case basis.

Many local roads are primitive, poorly located and difficult or impossible to maintain. They are continuing to deteriorate, cause resource damage and become safety hazards and many need reconstruction. Non-system travelways are usually not necessary for administration of NFS lands or access to them. Many of these routes are old timber, range or mining roads that may or may not have been altered to eliminate vehicular traffic. Others have been created by unapproved recreational use. Because many of these ways appear on the landscape as a road and in many cases cause resource damage, there is a need to monitor their use and condition and close them as soon as funding allows.

Figure RM-1. Roads decommissioned on the Wasatch-Cache National Forest from 1991 to 2001.



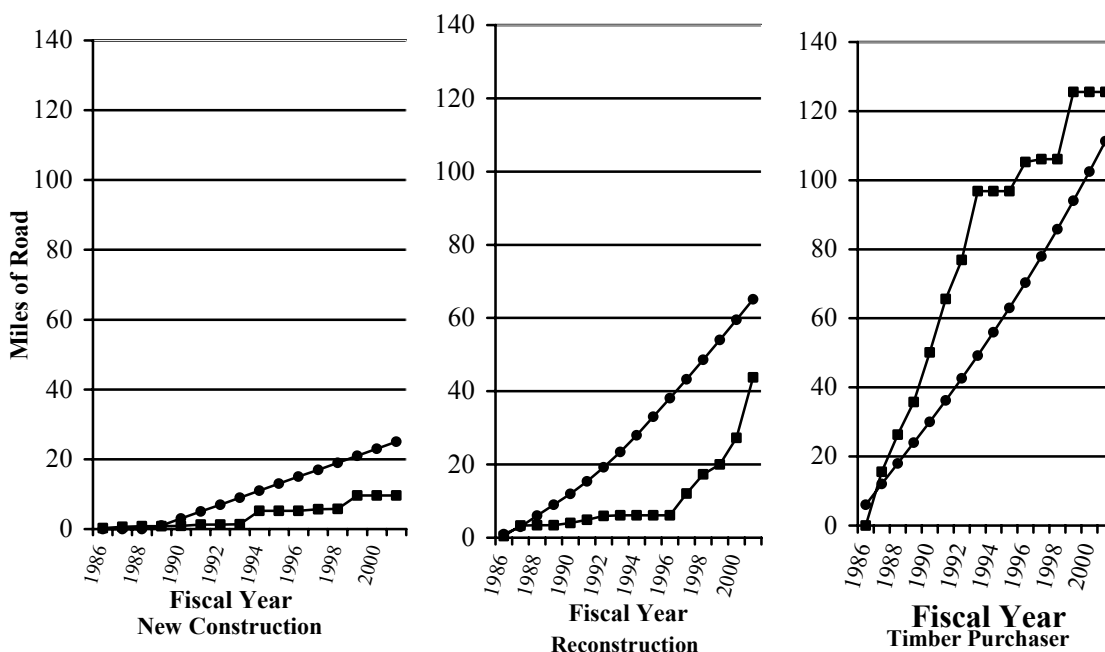
Roads decommissioned include classified and unclassified roads. This chart may include roads where the use has been converted to trails. It may also include roads that have been decommissioned as a road has been rerouted to minimize environmental damage such as the Temple Fork Road.

Public scoping has shown that many of these travelways are of interest and value to some Forest users. Some of the public wants them kept open (or re-opened) for motorized and mechanized recreation and access, while others want them closed to protect roadless, non-motorized recreation, wildlife and watershed values. As these routes are located and inventoried, management objectives for them need to be developed. In many cases, the objective will be to eliminate the route by obliteration and revegetation.

Road Construction and Reconstruction

The current plan had miles of new roads construction and reconstruction planned on the Forest. Primarily, because of reductions in the timber sale program and lower than expected appropriations for capital investments, many of these roads were never constructed or reconstructed. Over the past decade, road construction has declined significantly. Since 1986, there have been 48 miles of road constructed and 214 miles of road reconstructed. Road reconstruction and realignment is intended to improve water quality, provide wildlife security areas, and create an efficient transportation system.

Figure RM-2. Road improvements as projected in the 1985 Wasatch-Cache National Forest Plan (—●—) compared to the actual improvement completed (—■—) on the Forest for the year 1986 through 2002.



Road Density

The 1985 plan states road density levels will be established for management areas based on criteria such as public safety, excessive soil loss or water quality degradation, conflict with wildlife habitat use, roads not needed for resource management, protection of visual quality, returning area to forest production, reducing user conflicts, reducing maintenance costs, and providing diverse opportunities for non-motorized recreation. As a result of establishing density levels, roads were to be closed, further evaluated or left open. In some cases on the Forest, actual densities inventoried during project planning were found to be much higher than the maximums presented in the 1985 Plan. Some areas identified in 1985 as too high in road density, still have undesirable road densities (Wasatch – Cache Preliminary Analysis of the Management Situation, 1999). Travel Management planning has been the approach for evaluating these on a case-by-case basis for retaining or decommissioning.

Revised Statute 2477

It is believed there are few Revised Statute (RS) 2477 roads on the Forest. These roads are public ways constructed across public lands prior to the date of National Forest reservation, have some form of construction, and have been used as a public highway. The Forest Service does not have a definitive regulatory mechanism by which it can administratively recognize public roads under RS 2477. Only a legal determination usually through a court action can actually establish an RS 2477 right-of-way.

Roads Analysis

In January of 2001, the Chief of the Forest Service approved a new road policy that uses a science-based forest transportation system that meets the needs of the public yet minimizes or reverses the environmental impacts often caused by roads. The new policy is aimed at providing managers tools to make better more informed decisions about where, when and if new roads should be constructed, to close or decommission old unneeded and unauthorized ghost roads; to upgrade forest roads as appropriate, to meet changing uses, local communities access needs and growing recreation demands and to identify sustainable funding sources for maintaining forest roads system.

Interim directive 7710-2001-3 of the Forest Service Manual provides managers direction for completing the roads analysis. It relies on the Forest Service report called *Roads Analysis: Informing Decisions About Managing the National Forest Transportation System* (USDA Forest Service 1999). Roads analysis is an integrated ecological, social, and economic science-based approach to transportation planning that addresses existing and future road management options.

A Roads Analysis of the forest's higher standard roads, Maintenance Objective Levels 3-5, was completed during the winter of 2002. Identification of potential environmental risks and benefits for individual road segments will be helpful in prioritizing future watershed analysis or other site-specific analysis of the transportation system. A more detailed description of the analysis

process followed can be found in FEIS Appendix B-5. The complete report is posted on the forest website at www.fs.fed.us/wcnf.

Scenic Byways and Backways

Several US and State Highways, as well as County roads access the Forest. There are several designated Forest Service scenic byways and backways on the Wasatch-Cache:

Table RM-6. Scenic Byways and Backways on the Wasatch-Cache National Forest

Name	Number	Type
Logan Canyon	US 89	Byway
Ogden River	Utah 39	Byway
Big Cottonwood	Utah 152	Byway
Little Cottonwood	Utah 210	Byway
Mirror Lake	Utah 150	Byway
Skyline Drive	FS Roads 007, 008 and 167	Backway
Trapper Loop	Utah 167	Backway
Willard Peak	FS Road 084	Backway
Hardware Ranch	Utah 242	Backway
South Willow	FS 171	Backway
Guardsman Pass	Utah 224	Backway
Pioneer Memorial	Utah 65	Backway
North Slope	FS Roads 058 and 072	Backway
Broadhead Meadow	FS Road 416	Backway

Source: Forest Service GIS Database.

Environmental Consequences

General Effects

Road construction and reconstruction are usually associated with timber harvest, utility lines, mineral and energy development, recreation facilities, and public safety. Most of the Forest road needs for the current level of use are in place. Reconstruction, maintenance, and decommissioning of existing facilities are expected in all alternatives. Projections for new construction are much lower than was predicted for the previous planning period. Commercial use of the transportation system has declined in the 1990s and this trend is expected to continue in the coming decade. On the other hand, recreation traffic has increased substantially. This shift in traffic composition and user types is a driving force for development of new travel management philosophies and strategies.

New standards and guidelines have been developed to mitigate the impacts on natural resources resulting from the current road system and its increased use. Nationally, the trend in the 1990s has been to redirect maintenance funding to decommission unneeded roads and improve the maintenance conditions of those remaining. A smaller, more efficient transportation system is the expected outcome.

Even though the total overall miles of roads do not change significantly by alternatives, the management prescriptions assigned to areas may affect some future road management objectives for specific areas. An example of this would be within a Prescription 3.2D, after completion of vegetation treatment projects to improve terrestrial habitat, whether or not roads remain open will depend on the overall road density and specific wildlife management needs in the area. Maintenance effects are the same for all alternatives based on experienced budget levels. Roads are usually maintained on a priority basis with items like user safety, resource protection, and user comfort needs used to prioritize roads for maintenance. Road maintenance will probably remain below full capacity based on those budgets, but it is hoped that it will improve over current levels, because of the emphasis nationally on environmental effects caused by roads and needed maintenance to reduce those effects.

Travel Management Planning

Presently, travel management across the Forest is identified in District travel plans. These travel plans remain in effect until they are revised based on site-specific analysis including public involvement. The final decision for plan revision could have some effects on travel management planning. This includes potential road management changes based on management prescriptions as described in the example above.

Public comments and discussions after review and comment on the DEIS revealed needs for updating some District Travel Plans, particularly Ogden, Salt Lake, and Logan Ranger Districts. Given this need an Objective was developed and included in the Revised Forest Plan to complete this work in the near future. Changes resulting from these site-specific Travel Planning analyses may require Forest Plan amendment, particularly if they affect Recreation Opportunity Class mapping. This is an expected and appropriate type of adaptation of the Plan to changes in the future.

The Revised Forest Plan provides implementation guidance for travel management planning in the form of criteria and considerations to be used during updates. Site-specific issues to be addressed in future travel planning could include seasonal road closures, wildlife and fisheries habitat needs, undeveloped recreation site access, resolution of user conflicts, designated OHV routes, and/or mountain biking routes.

Comments on the DEIS also raised questions about how Recreation Opportunity Spectrum mapping was intended to be used in the future when Travel Management Plans are updated. People wanted to know whether a mapped ROS Class such as Semi-Primitive Non-Motorized would preclude consideration of additional motorized routes in that area, for example to develop a loop between existing motorized routes. Likewise, people asked if an area is mapped as Semi-Primitive Motorized because of an existing motorized trail, would that trail be precluded from consideration for closure and return to non-motorized status because of the ROS Class. These excellent questions resulted in re-examination of how ROS was to be used and what its relationship is to Travel Management Planning. Our conclusion was this: ROS Maps will provide direction for managing recreation settings *until such time that Travel Management Plans are updated through site-specific analysis*. As Travel Plans are updated, that analysis can

include alternatives that would require amendment of the Forest Plan ROS Maps. In other words, *ROS Mapping necessarily follows Travel Management Plan updates*, rather than preceding them or precluding certain changes to them. This ensures that a range of options can be considered at the site-specific level which is the appropriate scale for decision making on designated open travel routes.

Open road densities are defined by current District travel plans. Generally road density stays the same in alternatives for most areas, except for slight decreases, where there are roadless areas recommended for wilderness and slight increases, where there would be roads constructed for timber harvest or oil and gas exploration and development in roadless areas. Disposition of roads after use for these purposes needs to be decided in site-specific analyses and will be tied to Management Prescriptions.

Results of Roads Analysis

As stated earlier the Wasatch-Cache, using the roads analysis process, conducted an analysis of roads with a Maintenance Objective level of 3, 4, and 5. This process resulted in recommendations, not decisions. Roads were evaluated with consideration of their “costs” and “benefits”. Costs were defined as environmental threats to resources such as water quality, riparian habitat, terrestrial species and aquatic species. Of the 423 road segments analyzed, 28 segments or 13.0 miles of road had insufficient information to identify environmental risks. Seventy-five road segments or 77.8 miles of road were identified as having a low environmental risk. Two hundred segments or 357.1 miles of road were identified as moderate environmental risk. One hundred and twenty road segments or 179.2 miles of road were identified as having high environmental risks.

Benefits were defined as providing public, private or administrative access and maintenance costs. No road segments were identified as being low benefit based on the above criteria. This finding was likely given that the roads analyzed were of higher maintenance objective levels. One hundred and sixty two road segments or 131.1 miles of road were identified as having moderate benefits. Two hundred and sixty one road segments or 496.1 miles of road were identified as having high benefits.

By comparing the cost and benefit relationship for a road segment, the initial forest wide review suggests that 275 road segments or 434.9 miles of road should be retained. No roads segments of maintenance level 3, 4, or 5 were initially identified for potential decommissioning. Site-specific analysis will be required to validate these findings.

Effects on Roads/Access Management from Inventoried Roadless Area Management

Direct and Indirect Effects

Roads and access management are affected in several different ways from management of inventoried roadless areas. Because recommended wilderness does not allow mechanized or motorized use, access for these uses on currently open roads and trails within areas

recommended for wilderness would be eliminated. Alternative 1 has 2.3 miles of system travel plan roads that would be closed as a result of inventoried roadless areas being recommended for Wilderness designation (1.9 miles in Lakes and 0.4 miles in Stansbury roadless areas). All other alternatives have no system travel plan roads in recommended wilderness areas and therefore no road closures would result from wilderness recommendations.

Alternatives 1 would be the most restrictive on motorized access on trails in roadless areas recommended for wilderness. Alternative 1 would affect about 76 miles of motorized trails in roadless areas recommended for wilderness. Alternative 2 would affect about 7 miles of motorized trails in roadless areas recommended for wilderness. Alternatives 3, 6 and 7 have no motorized trails in roadless recommended for wilderness. There would be no displacement of motorized recreation users because no wilderness recommended in alternatives 4 and 5. Mountain bike use is not allowed in wilderness or recommended wilderness. Alternative 1 has the most miles of trail currently open to mountain bikes that are in recommended wilderness at 167 miles, followed by alternatives 2, 7, 6, and 3. Alternatives 4 and 5 with no recommended wilderness should have no effects on mountain biking.

The Forest Service Roadless Area Conservation Rule would have an effect on road construction and reconstruction. Alternatives 1, 2, and 6 incorporate this rule. The direct effect of the rule in these alternatives is that roadless dependent values in inventoried roadless areas would receive protection and management emphasis. It could preclude new road access (not trail) within these areas to forest resources such as timber, minerals, and additional motorized recreation opportunities.

Under the Roadless Area Conservation Rule, no new road construction or reconstruction would be permitted within Inventoried Roadless areas without one or more of the following exceptions:

- To protect health and safety threatened by a catastrophic event;
- To conduct environmental cleanup,
- To provide for statutory or treaty rights;
- To prevent irreparable resource damage;
- To rectify existing hazardous road conditions; or
- A road is part of a Federal Aid Highway project.

Effects on Roads/Access Management from Recreation

Access that is safe and convenient to the Forest Visitor is critical to ensure a positive recreation experience. Recreation use will continue to increase as the population growth along the Wasatch Front continues and along with that, the use of forest roads will also increase. Arterial and major collector roads that connect the forest will experience increased day-use traffic especially on weekends. This traffic will add to the maintenance necessary to keep the roads in a safe and structurally sound condition.

In alternatives 3 and 5, roads constructed from timber harvest could be left open after the harvest to maximize access for recreation. Roads could also be left open in alternative 4, but other roads would have to be decommissioned to maintain current road densities. Roads being considered for

decommissioning in future travel planning decisions can be evaluated on a site-specific basis to see if they could be converted to meet motorized and non-motorized trail needs.

New road construction is not allowed in Alternative 1. For Alternatives 2 to 7, new road construction for recreation purposes is expected to be very low and not vary much by alternative. It is anticipated that some reconstruction will occur, but it will be minimal, since most of the infrastructure is in place. Road operation and maintenance activities will continue to be essential in providing safe and convenient transportation facilities.

An adequate budget to support road maintenance will continue to be a challenge. Paved roads provide access to many campgrounds and cost \$10,000 to \$15,000 per mile to maintain. For most roads in the Forest, road damage occurs in the spring from recreational driving and in the fall from hunting activities, when wet weather conditions often saturate road surfaces.

Effects on Roads/Access Management from Timber Harvest

Alternatives with higher amounts of timber harvest would have greater amounts of new road construction. Alternative 1 would have no new roads constructed for timber harvest.

Alternatives 2, and 6 would have about 6 and Alternative 7 would have about 7 miles of new roads constructed for timber harvest. Alternative 3 would require about 39 miles of road constructed for timber harvest, while alternatives 4 and 5 would require the most new roads at about 49 miles. Given that the current budget levels for roads maintenance are not equal to the needs for the already existing road system, new roads would add to the maintenance backlog.

Indirect effects of timber harvest include additional access provided for other Forest activities such as recreation uses, management of livestock grazing, and fire suppression. Also funds generated through timber sales may be used to decommission unneeded roads within the sale area.

Effects on Roads/Access Management from Oil and Gas Activities

Road construction is often associated with mineral and energy exploration and development activities. Limited road construction for these activities is anticipated for all the alternatives. Oil and gas exploration and development activities would require some road construction and reconstruction. Alternative 4 would have no new roads constructed because no leasing decision would be made. Alternatives 1 and 2 project 3 miles, Alternatives 3 and 6 project 6 miles and, Alternative 7 projects 7.5 miles. Alternative 5 would be the highest with an estimated 11 miles of road construction or reconstruction needs. For alternatives where new road construction is required, indirect effects would be access provided for other Forest activities such as recreational use and fire suppression if through site-specific analysis it is determined the road stays in place.

Effects on Roads/Access Management from Special Use Authorizations

Pipelines, overhead power lines, and communication developments can potentially require road construction or reconstruction for installation and maintenance. In some cases, helicopters can be used effectively reducing new road construction needs. Little or no road construction and reconstruction associated with these sites is anticipated for all alternatives. A site-specific analysis would be needed prior to final approval of any utility or telecommunications site.

Cumulative Effects

Analysis Area and Area of Influence

Reasonably Foreseeable Actions

The use of Forest roads will increase as populations grow and urban development expands near the WCNF. Primarily for recreational purposes, Forest arterials and major collectors that connect the WCNF to these areas are expected to experience the most increased day-use traffic, particularly on weekends. This traffic adds to the maintenance work necessary to keep roads in a safe and structurally sound condition. Road use for non-recreational purposes is not expected to increase and should not add substantially to road use surrounding the WCNF.

As travel to and through the WCNF increases, there will be an increase in congestion on surrounding public roads. Roads could see increases in use during the winter as decisions by other land management agencies such as in Yellowstone National Park restrict the use of snowmobiles within their areas. This could lead to more use locally as snowmobile use is displaced elsewhere.

The Forest Service is required by law to provide reasonable access to private inholdings. As ownership of these lands has changed in recent years, routes previously open to public access are frequently gated and locked. Current funding levels for activities to obtain right of ways are inadequate to keep up with these changes and public access to National Forest boundaries is decreasing.

